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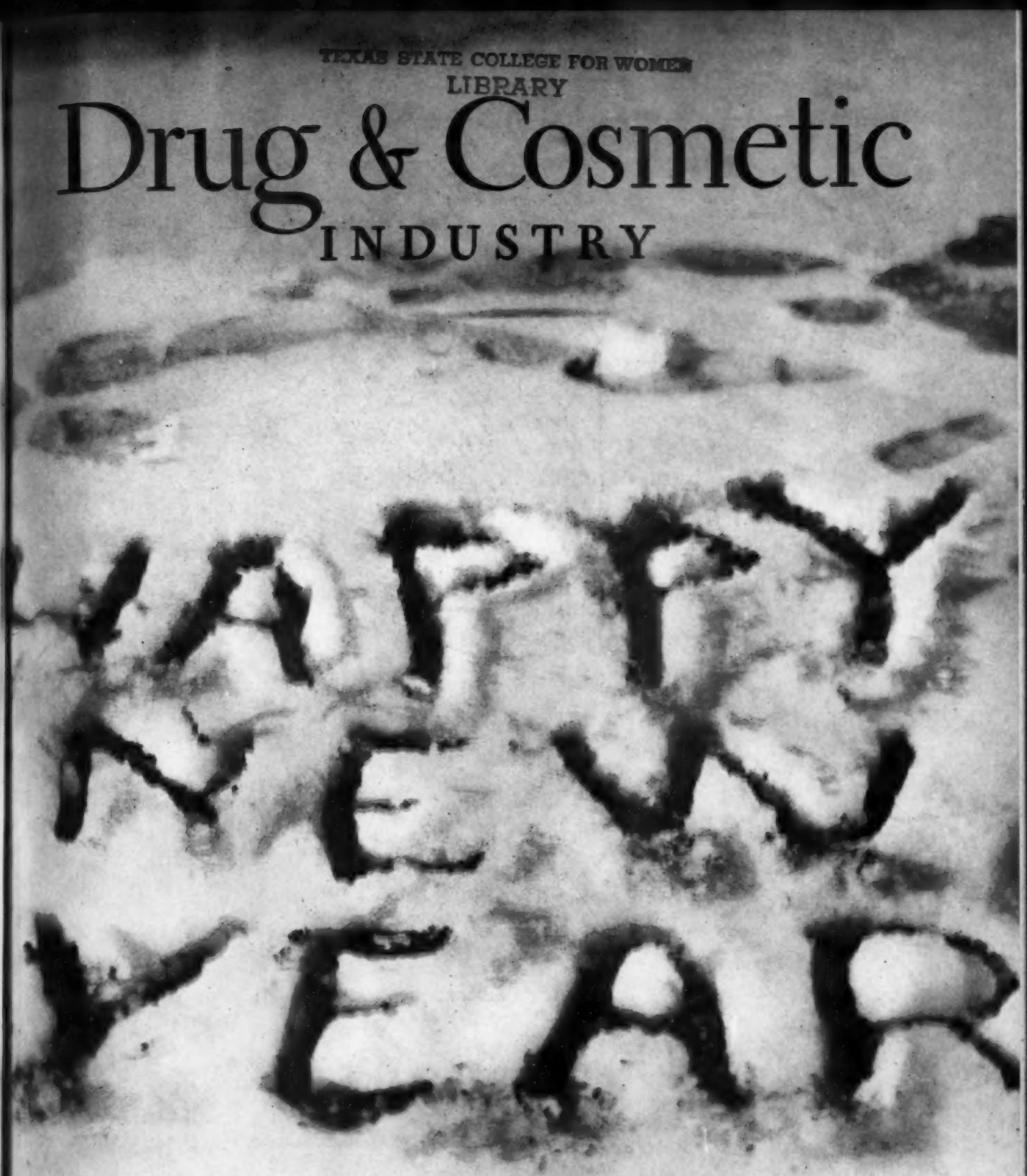
Drug & Cosmetic INDUSTRY



December 1945

What's in a good flour BESIDES WHEAT

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Medium	17-23	19-27	25-45	24-40	.675-0.550	42.1-34.3
Heavy	15-17	15-19	20-25	19-24	.800-0.675	49.9-42.1
Extra Heavy	11-15	11-15	15-20	15-19	.950-0.800	59.3-49.6

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Drug & Cosmetic INDUSTRY

DECEMBER 1945

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HIGHLIGHTS FROM THE DECEMBER ISSUE

American Druggist

THE BUSINESS MAGAZINE OF EDITORIAL VITALITY

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More about Streptomycin!

In November, we pointed out that the new drug, Streptomycin, was a companion to penicillin. In December, we've carried this thought over, and have prepared a chart which will show the druggist, the doctor, and the research specialist, just why and how these two drugs are linked together. Never done by any publication before, this valuable comparison chart is fully annotated to show references of authority.

Stop, Look, Listen, and Consider!

If you don't stop and consider how you're doing, you may do wrong forever. That's why this issue ends the year with a quick cosmetic merchandising check list. The druggist can match his department's operation against this article and find out where he's weak. On January first he can make a few merchandising resolutions and get back on the right beam. Agency men and cosmetic men may get some good ideas, too.

A $100,000 Reference Book!

December first will see publication of the 1946 American Druggist Blue Book, the annual directory of drug products and prices. A year's work and $100,000 have gone toward making this the finest Blue Book ever produced. How it has been improved, the additions that have been made, and other pertinent information about the Blue Book is told in this four-page story, illustrated with actual pages from the directory.

A New Store For $7,000!

"A Remodeling Case History" is the complete, factual account of how Edward De Christopher, a druggist in Peekskill, modernized his store. On an investment of $7,000 he has created an entirely new store, fresh and clean and profitable. This illustrated four-page feature, crammed with cost figures, will give every druggist in the country an opportunity to evaluate his own remodeling needs. It answers the questions of "How can I do it" and "What will it cost".

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BEAUTY PROGRESS

An example of early cosmetic advertising... this tile sign that hung outside an American Apothecary Shop, probably about 1870.

BEHIND locked doors, the glamour girls of another day experimented with strange concoctions of milk, vinegar and the juice of the pear to whiten their skins... because cosmetics were frowned upon by the Pilgrim fathers! Even the threat of "being brought up in meeting" could not stifle woman's beauty urge.

Today's woman has science to help her in her search for beauty. Modern cosmetics are not formulated on wishful thinking, but on scientific research. She is protected by laws, not *forbidding* the use of a cosmetic, but *insuring* that its ingredients are harmless, even that they are as beneficial as they claim to be.

The cosmetics of the future afford infinite possibilities of improvement as research, speeded by wartime necessity, has opened new vistas to us. Plans for the improvement of your product may be discussed now by appointment at the Allied Office, R.C.A. Building, Radio City, New York.

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Thanks to America's PA's from MM&R

MM&R takes this opportunity to thank the purchasing agents of America for their splendid cooperation and understanding through four trying years.

Sometimes we couldn't supply your needs fully, sometimes the "superior MM&R service" took a shellacking, sometimes we had to tell our PA friends, "Sorry, we haven't an ounce of Lavender Oil . . . Lemon Oil, or Anise."

But most of the time, if the real McCoy wasn't available, there was a solution—an excellent MM&R Replacement Oil, or a suggestion that helped a harried PA out of a dilemma.

It's been tough sledding for you and for us. We'll be glad when once again, we can sell to PA's who buy on the basis of quality . . . for that's the way we've made our way these past fifty years.

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INSIDE NEWS

DECEMBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1945

Meal Preparation Revolutionized by Wartime Development of Canned Meat Combinations

The development of a wide variety of canned meats—in combination with vegetables and gravy—promises a brighter future for the family pantry . . . as well as for the food processor.

Brought to the fore when the Quartermaster Corps increased the variety of food for men in combat, these new "combination meals" have become very popular.

At first, the Army had only ten canned meat items to serve soldiers stationed in forward combat areas. Ten different kinds of canned meat may seem to be a wide variety, but when you consider meat the mainstay of the meal, even ten different canned meats lose their appeal when they're served day after day. As a result, new combinations were planned that could be canned and delivered safely to the boys in the fighting lines. Although meat and vegetable combinations were never made before for canning, the project was pushed ahead.

New Combinations Planned

Combinations were made of meat with noodles, with rice, with potatoes and gravy and sauces to give variety to meat meals and well-balanced, nourishing food at the same time.

By V-J Day, 45 different meat items were included in the cans that made up the bulk of our fighting men's food. Quite different from the "corn willy" and "goldfish" of the last war, these new canned meat combinations were made especially to appeal to the tastes of American boys used to good American food.

Mouth-watering Courses

Ham and candied sweet potatoes, beef and gravy, fat little sausages all set to eat were also packed neatly in cans. These canned "main courses" made menus more interesting for the men on the fighting fronts where canned meats were the only ones served.

Savory ham in raisin sauce became a universal favorite. Chopped ham and eggs, pork and rice, ham and eggs with diced potatoes, pork and applesauce were some of the other combinations—whole meals sealed neatly and safely in tin and steel containers.

A meal including one of these combinations was really something to write home about. Even at home, it would have been something to get excited about!

Canned bacon which could be eaten hot or cold was also very popular. And it was a treat to find bacon safe and delicious, all packed in cans, so far from home.

Making up these gourmet delights was possible only because cans were such perfect protective containers. Just as cans brought good food to the fighting fronts, they are going to bring better and a wider variety of foods to civilians than ever before. These new combinations and conveniences in menu planning will be supported by good nutrition for which canned foods are already famous.

New Markets

So far, indications are that some of these new meat combinations can be expected in cans on grocers' shelves, though it isn't known just how many or which ones.

The peacetime civilian markets for these canned foods should be great. Appeals for "quickie" meals when unexpected guests drop in, or even when the housewife herself hasn't too much time, can easily sell the consumer public.

Manufacturing cans for food, chemical, drug, cosmetic, oil and paint products before the war, National Can Corporation turned its full production and research facilities during the war to supplying the armed services with protective containers. Today, you can draw on this broad experience to solve your packaging problems. A National Can representative will be glad to offer his long packaging experience in discussing your packaging needs. Write or phone the nearest National Can branch today. Sales offices and plants are conveniently located. 1141

Apple Syrup

Cull apples have been a drug on the market whenever there was a large apple crop. Within recent years, food technologists have been developing by-products from these waste apples. One procedure was developed for making an apple syrup. This has found favor in industrial applications as a moisture-retaining agent because of its high levulose content. It is also being used as a tobacco humectant.

As an edible food, it is objectionable because of its slightly bitter aftertaste. The removal of lead and arsenic spray residue deposits was difficult under this initial process. However, continued work by this food laboratory found a solution to the objectionable aftertaste and spray residue problems. The new procedure uses the absorption powers of ion exchangers. 1142

Oyster Beds Resist Explosives

Louisiana industries were desirous of determining whether there would be any damage to oysters by normal oil exploration charges. Extensive dynamite experiments were made that will have far-reaching effect on the oyster and oil industry. The size of the charge ranged far in excess of those usually permitted. The experiments revealed that the oysters and oyster beds were not damaged.

In the tests, oysters were taken from the reefs before and after the charges were fired and given lengthy observation. Previously, research men conducted experiments to determine the effects of dynamite charges on fish and shrimp in the Gulf area. 1143

Marmalade Vitamins

Average commercial marmalades of unknown history, obtained from retail stores, range from 4.4 to 9.1 mg. of ascorbic acid for 100 g. Specially prepared marmalade, suggested as a vitamin supplement material, may show an average after cooking of 28.6 mg. ascorbic acid per 100 g. This special marmalade has a fruit to sugar ratio of 1.2 to 1. The trick in vitamin retention lies in the processing method. 1144

Cured Bacon Losses

Bacon that has been cured to withstand overseas storage conditions must be soaked before frying to make it palatable. But this overseas bacon, soaked before frying, loses all but 20 percent of the original thiamine and 30 percent of the nicotinic acid originally present, while 78 percent of the riboflavin remains. Losses in frying without soaking are much less. 1145

Some Spices Preserve

The old idea of spices as preservatives boils down to the proven statement that some are, and some are not.

Cinnamon and cloves, in water infusion, will prevent the growth of yeasts and may have an actual germicidal action. Pepper, either white or black, seems to encourage some yeasts. Several other spices are slightly discouraging to the yeasts but not effective preservatives. So if you are putting your faith in spice, make it cinnamon. 1146

Honey Inverters

Enzymes in honey may have technological interest, as well as providing a means to distinguish between genuine and artificial, or heated and unheated honeys.

Honey invertase, about which very little is known, differs markedly from yeast invertase, in some of its properties. However, the darker the honey, the greater its invertive activity toward sucrose. 1147

NATIONAL CAN

PLANTS: NEW YORK • BOSTON • BALTIMORE • CHICAGO • HAMILTON, OHIO • FORT WAYNE, INDIANA

Of Interest to Bakers

Army Spread, the butter-and-cheese-curd "preserved butter" that is made for the tropics, is found not to be suitable for home cooking but can be utilized efficiently by commercial bakers for cookies, sweet yeast-raised goods and Danish pastry. 1148

Crabs

Sea water is utilized for cooking and for washing king crabs on a cannery ship, according to an interview with the captain and the technologist of the vessel. The product needs no added salt and no buffer solution in the can.

A complement of about 400 persons, including the fishermen, is required on board the factory ship, in order to produce a pack of 400 cases each containing 96 half-pound flat tins of fancy or Grade A crabmeat. The less desirable grades are not packed. 1149

Meat Tenderness Studied

Tenderness is one of the important components of palatability in meat. A theory widely held for some time is that the fatter the animal the tenderer its meat will be. A reliable, easily applied guide to tenderness would be of great value to all who handle meat. Because of the many conflicting research reports, a series of experiments were planned primarily to observe the relationship between fatness and tenderness. Lambs were used in these tests. Extensive data and accompanying conclusions have been published in bulletin form. 1150

Weed Control

Growth-promoting chemicals may be important as weed killers. The weeds literally grow themselves to death. The action is selective in certain cases.

In a recent experiment, bindweed in an orchard was destroyed within 10 days, the below-ground parts being affected to a depth of 14 inches, while the apple root-stocks appeared unaffected. In another test, application during July, August and September caused the self-destruction of dandelion, narrow-leaved plantain, lamb's quarters, pigweed, and other weeds, and poison ivy was so weakened that the plants were dead by spring. Grasses, in general, are not affected. White clover, dandelion, narrow-leaved plantain and round-leaved mallow were removed without injury to a Kentucky bluegrass lawn. Cereal and turf seeds germinated normally in soil of the treated areas, 5 weeks after treatment.

The chemical used is 2-4-D (2,4.dichlorophenoxyacetic acid), already used for setting tomatoes in greenhouses and for promoting the rooting of cuttings. The extent of the weed-killing property is still under investigation and limitations on its use must be explored before it can be regarded as other than experimental, but it is promising. 1151

Technical Topics

EDIBLE OIL FOR PERFUMES—Filbert oil, one of the best edible oils, is said to have the property of absorbing and retaining odors in perfumes. 1152

PROCESS TIME—Thermal processing time or temperature can not be reduced for canned meat because of the presence of any or all of the common curing agents, NaC_1, $NaNO_2$, $NaNO_3$ and sugar, in the proportions permissible in meat products. 1153

INSECTICIDE SOLVENTS—Studies of the most acceptable solvents for DDT indicate that several ketones, such as acetophenone, cyclohexanone, methyl isobutyl ketone, isophorone, and mesityl oxide, have high solvent power for DDT. The aromatic hydrocarbons (benzene, xylene, etc.), the chlorinated aliphatics (methylene chloride, trichlorethylene, etc.), and the chlorinated aromatics (chlorobenzene, orthodichlorbenzene, etc.) are very good solvents. Solubility of DDT in certain ethers such as dioxane and anisole is also very high. Several esters such as ethyl benzoate and tributyl phosphate are only moderately good solvents. The aliphatic petroleum fractions are comparatively poor solvents for DDT, but will probably be widely used because of their ready availability. 1154

NEW BORAX-BASE FLUX—In a search for substitutes for fluorides, research workers developed borax-base fluxes for aluminum, which have proved extremely satisfactory. A typical composition is: Borax, 50 parts; potassium chloride, 25 parts; sodium chloride, 25 parts; titanium dioxide, 2.5 parts; sodium bisulphite, 11.3 parts. 1155

NEW ABRASIVE—Cerium oxide is reported to be far superior to any material heretofore used as a fine abrasive for polishing optical glass and metals. Its use was disclosed among the other secrets which the war got out of Germany. It is made from the crude hydroxide by treating with nitric acid, trisodium phosphate, and oxalic acid, and igniting. 1156

ZINC VANADATE—The efficacy of zinc vanadate as a catalyst in the synthesis of acetone from acetylene and water has been reported. The presence of carbon monoxide, carbon dioxide, methane, hydrogen, and a mixture of carbon monoxide and hydrogen, it is said, does not adversely affect the process. 1157

SYNTHETIC THYMOL SOURCE—Australian eucalyptus oils are being heralded as the source of synthetic thymol and menthol. The oil of *E. dives* and *E. numerosa* contains 45 percent to 50 percent of l-piperitone; the oil of *E. citriodora* contains 70 percent to 85 percent of citronella. 1158

NEW METAL PIGMENT—A patent has been issued for a finely flaked (325 mesh) electro-deposited nickel, making it the latest addition to the class of metallic pigments. 1159

BETTER LACQUER—The addition to plasticized shellac varnish of 7.5 percent to 10 percent (on the weight of the shellac) of ethylcellulose results in a lacquer which has properties equal to, if not better than, those of a standard nitrocellulose-dammar lacquer. 1160

PAPAIN FOR WOOL—Papain, used to treat wool, shows some promise of making "non-tickle" woolen clothing. 1161

EXPLODING FRUIT PEELS OFF—It is reported that a novel method for exploding the peels from vegetables and fruits has been patented recently. 1162

PECTINS SHOW POSSIBILITIES—Recent reports indicate that the metallic salts in pectin may have valuable industrial applications, such as in the cosmetic industry. 1163

GLYCERINE CRYSTALS—Method of preparing glycerine crystals to super-cool liquids has been announced. 1164

GLASS-TO-STEEL—Glass-to-steel fusing, to make a permanent airtight seal for metal electron tubes, is now possible through a method developed by engineers. 1165

CHEMICAL COMBINATIONS AND THE SKIN—Recent research is reported to show that living skin can be changed chemically under the influence of externally applied substances. 1166

AMINO ACID INFLUENCE ON PROTEINS—A recent study has revealed that amino acids are essential to increasing the nutritive value of foods. 1167

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

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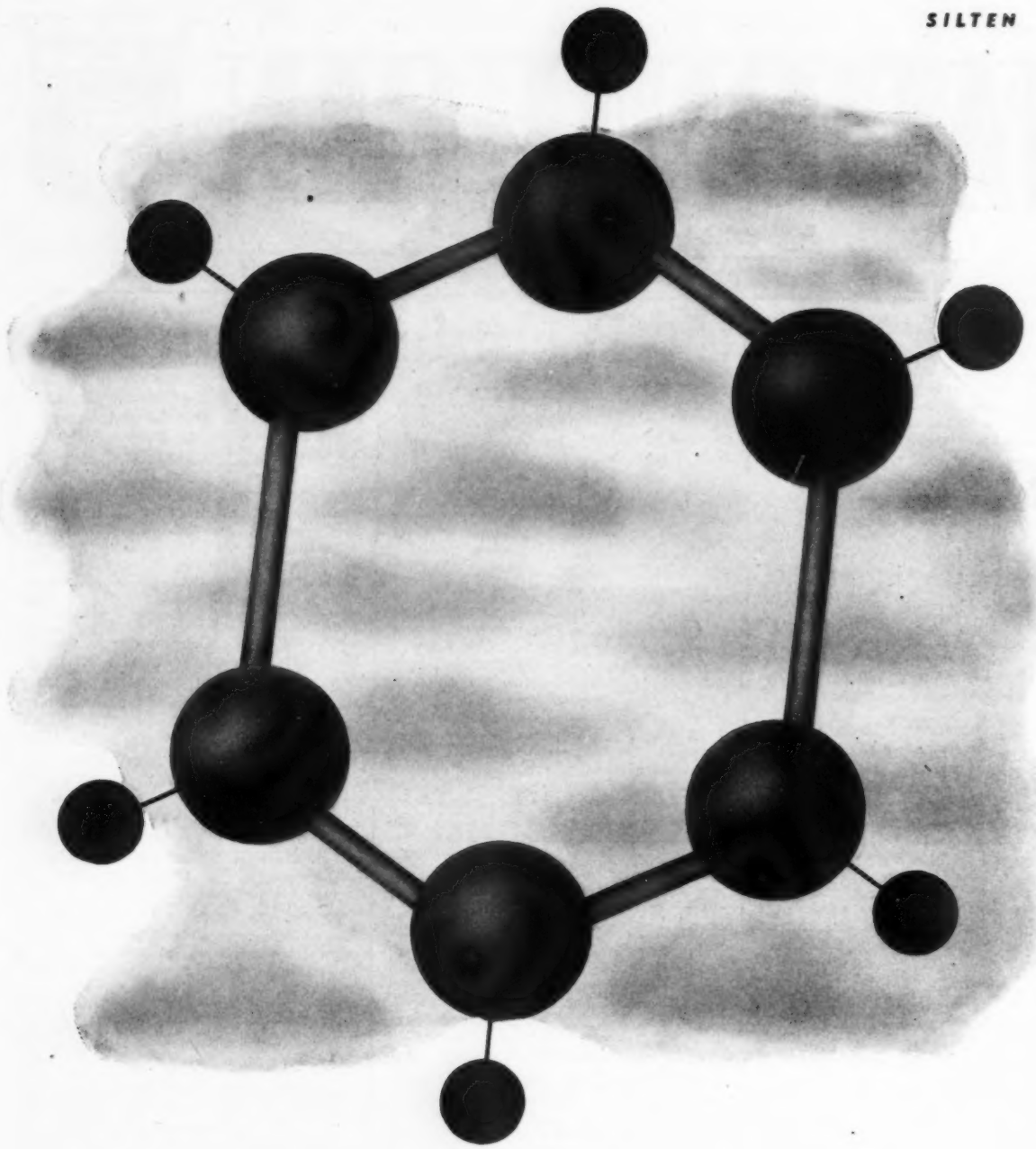

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How NOT to do it

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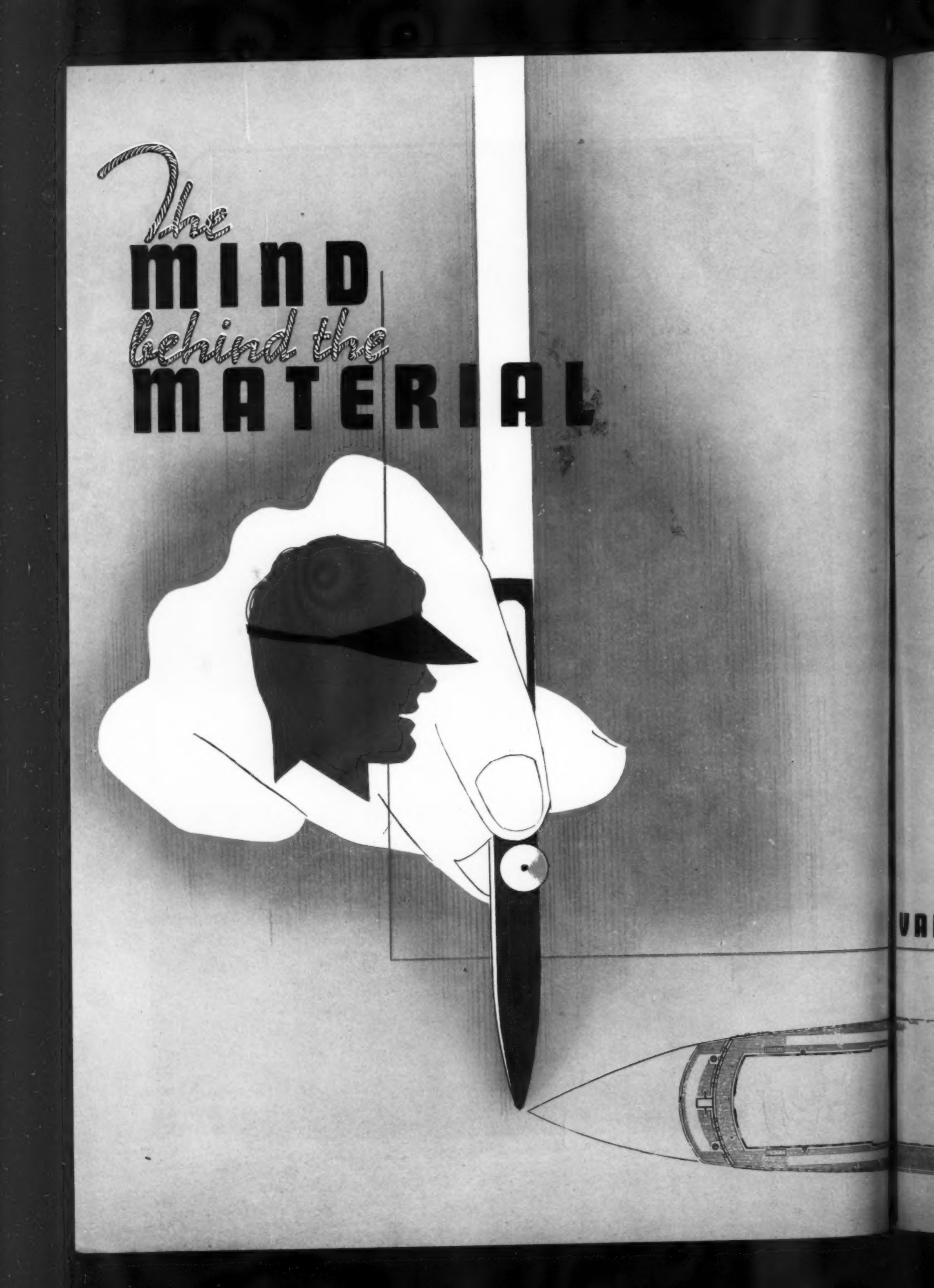
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MIND
behind the
MATERIAL

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are given the designer.

If he knows

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If the designer is superior he incorporates new ideas —new beauty

—new performance. The same is true with perfumes.

The superior minds and extensive knowledge of our research-

scientists are responsible for unusual,

novel combinations that lead to new, provocative

fragrances in the hands

of fine perfumers.

VAN AMERINGEN-HAEBLER INC

315 FOURTH AVENUE • NEW YORK 10, N. Y.

Are you planning a

Post War Miracle ?

You'll need good ingredients

To make those fine new preparations your trade is expecting, you'll need the best of ingredients! Your laboratory samples are prepared under ideal conditions; to duplicate these products in regular production, you need uniform, dependable ingredients of the grade as determined by your research. If you are planning post war preparations using white oils, petrolatums or other petroleum specialty products, you will be wise to (1) select your test samples from the Penn-Drake line, because it gives you a wide choice of grades, and (2) specify the grade you select for your regular production.

Close control of Penn-Drake refinery processes, plus extensive experience in making the grades you need assure dependable uniformity. Painstaking care in manufacture eliminates impurities that would cause deterioration of the finished preparation. You can depend upon Penn-Drake!

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Joyously, we join in the glorious, new spirit of this Holiday Season . . . Gone is the nostalgic, half-hearted feeling that restrained the exchange of Christmas Greetings—just 12 months ago.

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We wish you A Merry Christmas and A Happy New Year!

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P. S. Notre nouveau rouge "émollient" pour les lèvres mérite que vous vous renseignez à son sujet.

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Our two factories with fine modern equipment, are producing cosmetics of superior quality in every classification, in bulk and packaged.

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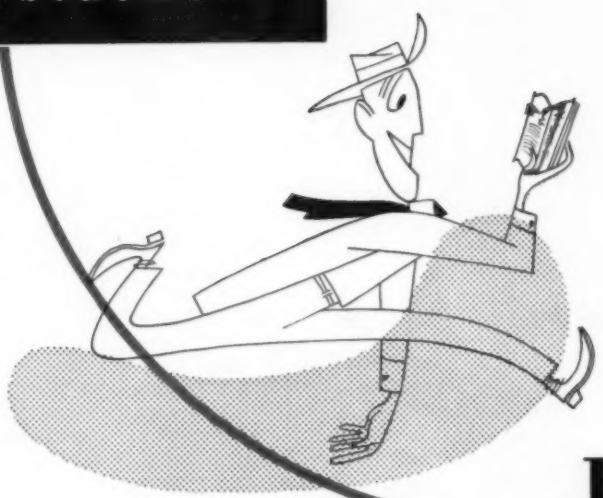

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Durlin's reputation lies in a customer service that has paid big dividends to the many users of their *Nail Enamel. Durlin* color sense, shown by an early awareness of fashion trends, selection of colors and aid in packaging has many times helped customers to that "extra edge" which brings success.

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BUTOBEN

Reg. U. S. Pat. Off.

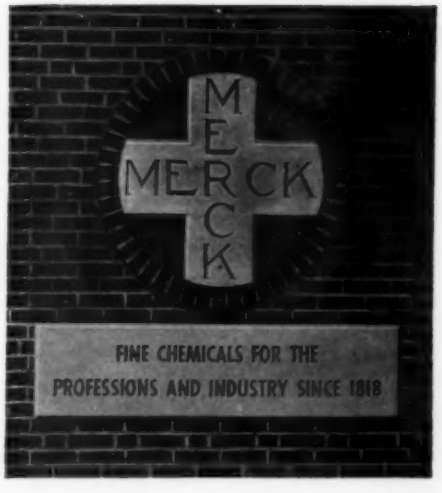
BUTOBEN (*n*-Butyl Parahydroxybenzoate Merck), an antiputrefactive and antifermentive agent, is an effective, nontoxic preservative in various preparations.

BUTOBEN can be used in acid and neutral products, as well as in moderately alkaline media. It is economical because of the small quantity required (2-100 of 1%), *i.e.,* only 1 ounce is required to preserve 35 gallons of a preparation. Suggested uses are in gum solutions for hairwave setting, and various types of liquid preparations, including face and hand lotions, cosmetic creams, medicinal elixirs, tonics, certain eye lotions, and emulsions.

BUTOBEN, while an excellent preservative for the aqueous phase of cosmetics, does not prevent rancidity of oils and fats, as this is not caused by micro-organisms, but by hydrolysis and subsequent oxidation, and for which purpose an antioxidant is required.

As many cosmetic and medicinal preparations are composed of several ingredients, some of which may be incompatible with certain preservatives, we suggest that you consult the Merck Chemical Service Department regarding your manufacturing problems and requirements.

Samples of BUTOBEN and literature will be supplied to manufacturers on request.



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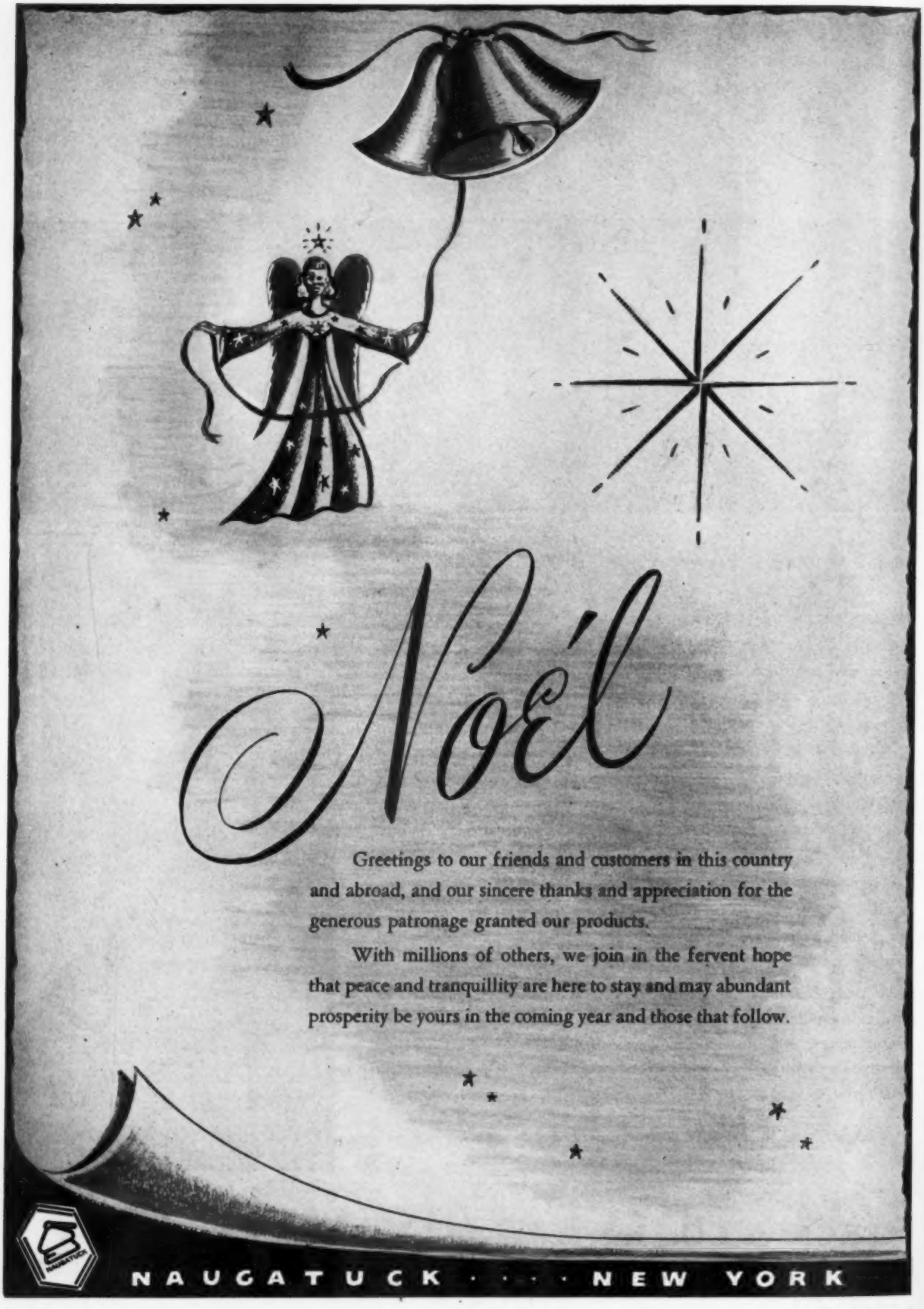
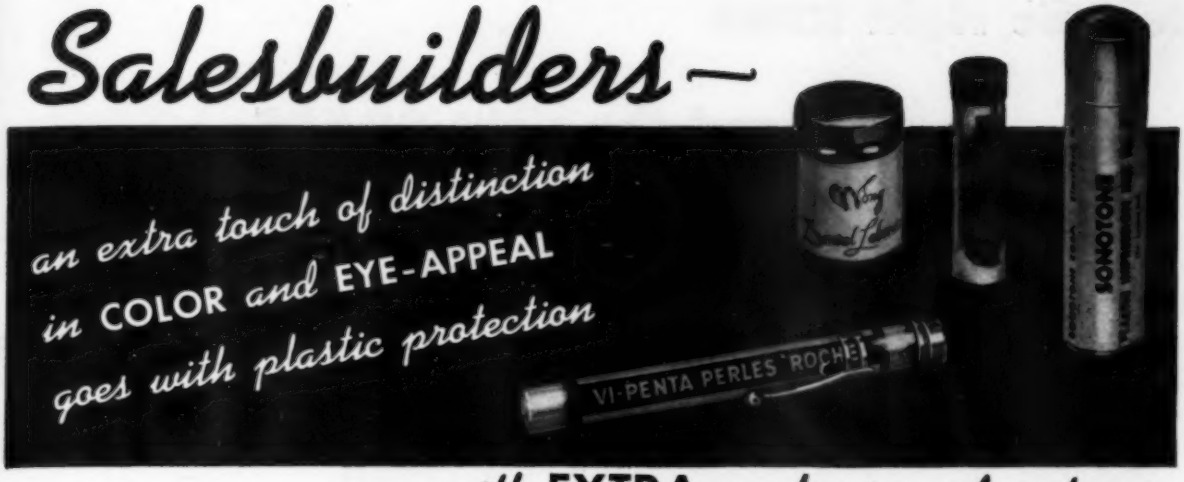
In Canada: **MERCK & CO., Ltd., Montreal and Toronto**


Noël
Greetings to our friends and customers in this country and abroad, and our sincere thanks and appreciation for the generous patronage granted our products.
With millions of others, we join in the fervent hope that peace and tranquillity are here to stay and may abundant prosperity be yours in the coming year and those that follow.
NAUGATUCK · · · · NEW YORK

Salesbuilders—

an extra touch of distinction in COLOR *and* EYE-APPEAL *goes with plastic protection*



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Have equipped many quality products with outstanding distinction. Scores of various commodities enlist the features indicated above because a better package implies a better product.

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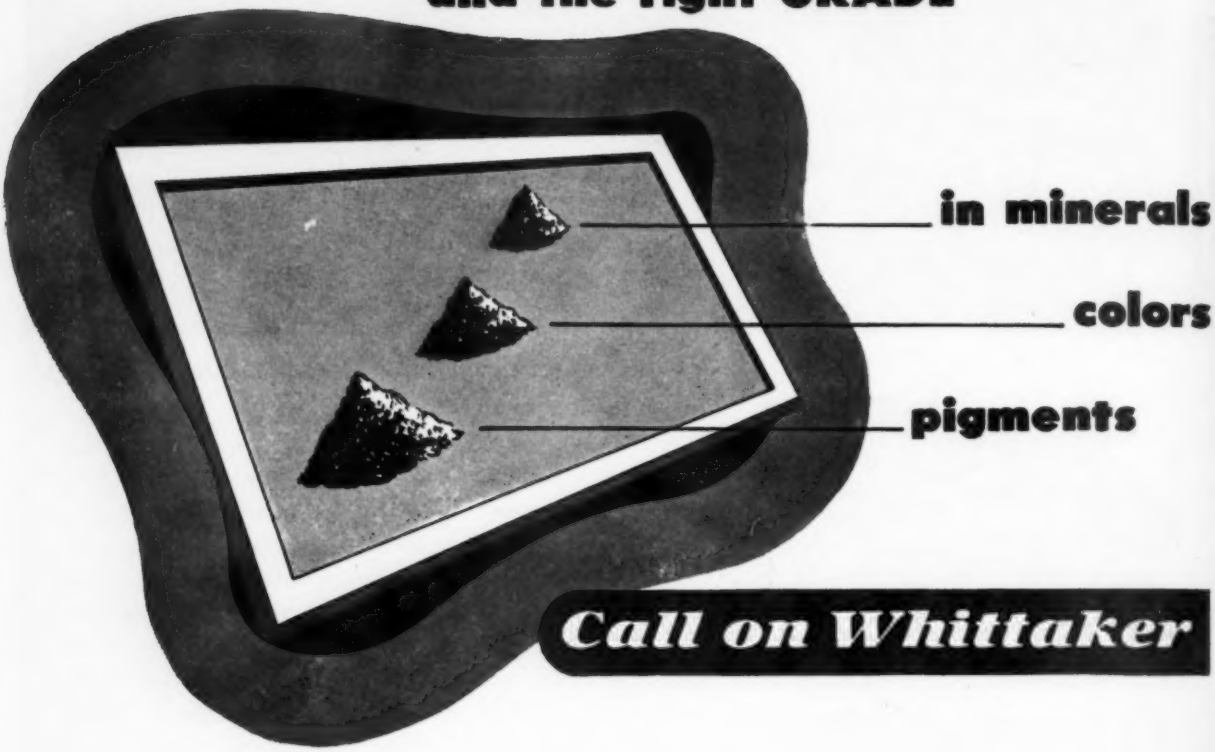
For the right KIND

and the right GRADE



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PUMICE STONE—powdered, granular, lump; American

CALCINED MAGNESIUM—extra light, medium, heavy

WHITING—chalk and limestone

MAGNESIUM OXIDE—heavy and light, U.S.P. and Tech.

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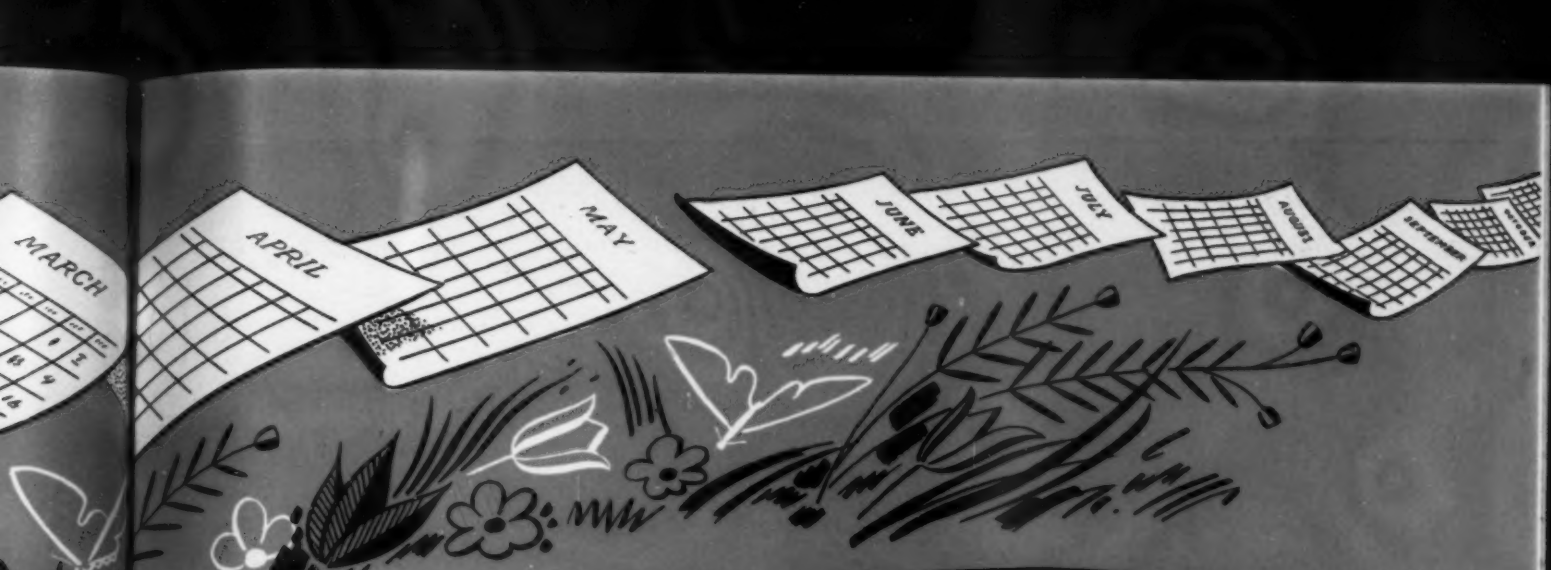

MCMXLVI

A New Year...

WITH BRIGHT New Prospects

NINETEEN HUNDRED AND FORTY-SIX...and the world turns to the pursuits of peace after six long war-torn years.

True, there are many troublesome questions that remain to be solved, but it is hoped that statesmanship and a mutual spirit of forbearance will prevail. *It must.*

With a full realization of the difficulties to be overcome, we nevertheless look forward with the confidence that advancement will not be denied, believing that the horizon of human betterment has not been reached. Therefore...

In these days of holiday cheer, the first Christmas and New Year to be born in Peace in many years, may we extend our good wishes to all...in the hope that the coming year may see a strengthening of bonds with our many friends...may see a further development of our common progress.

"BUY WISELY...BUY GIVAUDAN"

A YEAR OF PROMISE AND FULFILLMENT

Givaudan-Delawanna INC.

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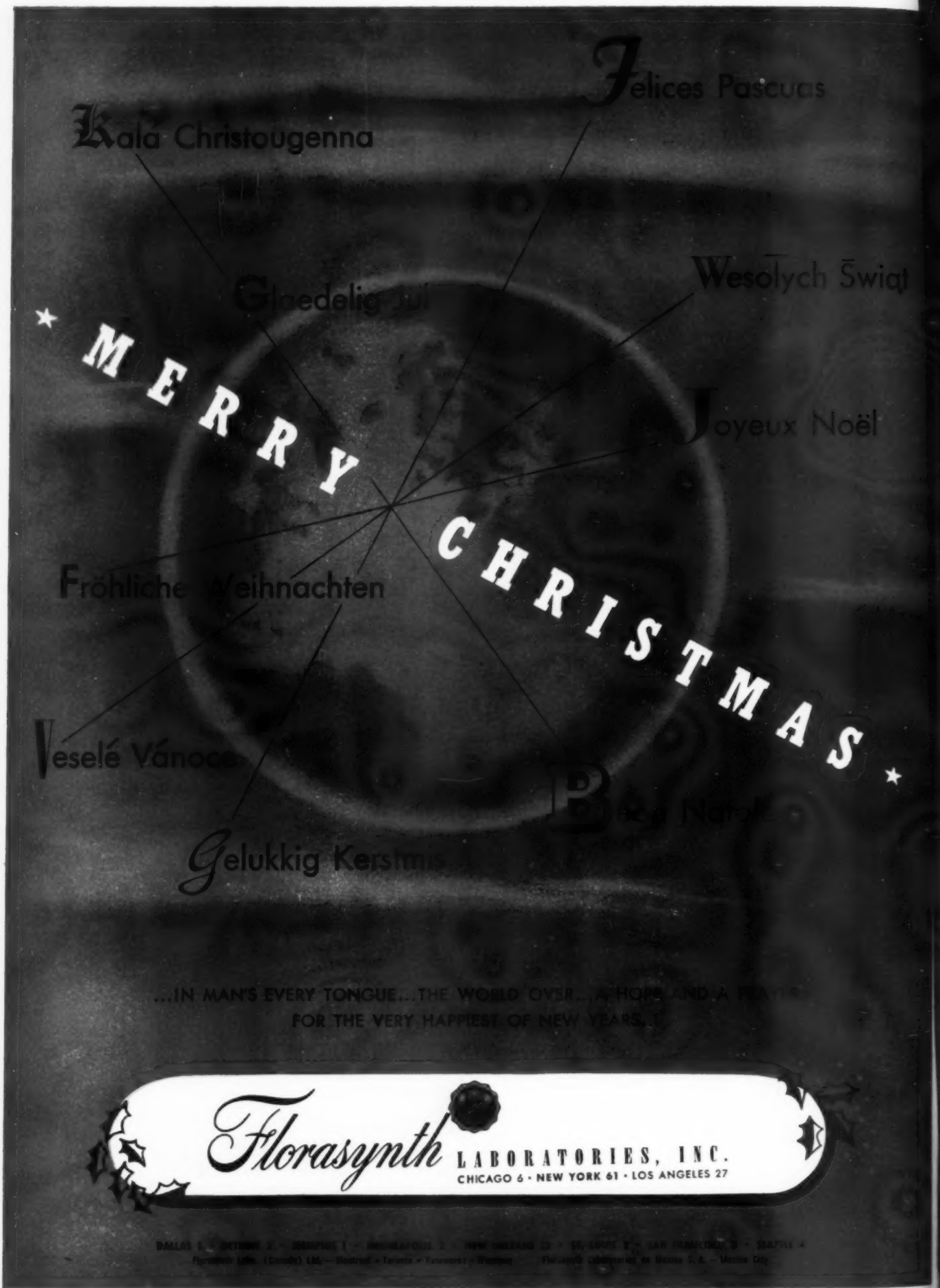
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Wesołych Świąt
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Joyeux Noël
Fröhliche Weihnachten
Veselé Vánoce
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...IN MAN'S EVERY TONGUE...THE WORLD OVER...A HOPE AND A PRAYER
FOR THE VERY HAPPIEST OF NEW YEARS...
Florasynth LABORATORIES, INC.
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Doesn't this mean you should communicate your requirements of the bulk pharmaceuticals listed on this page to CALCO right away?

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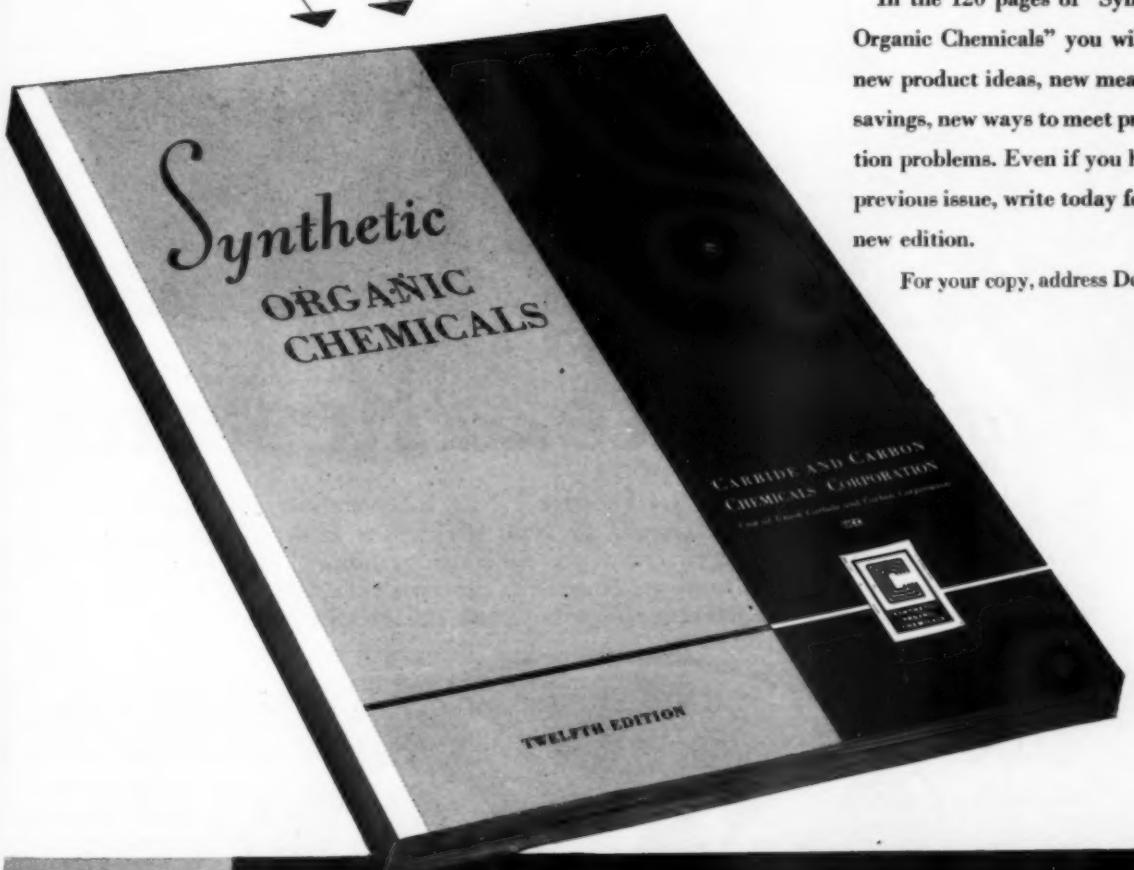

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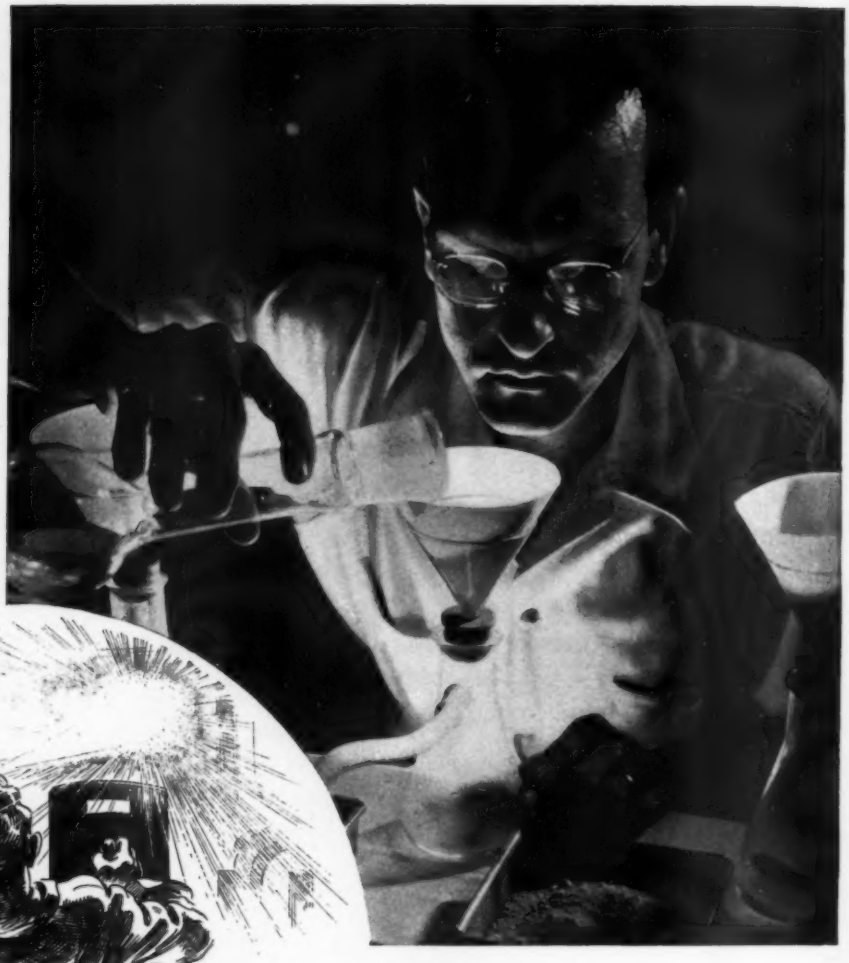

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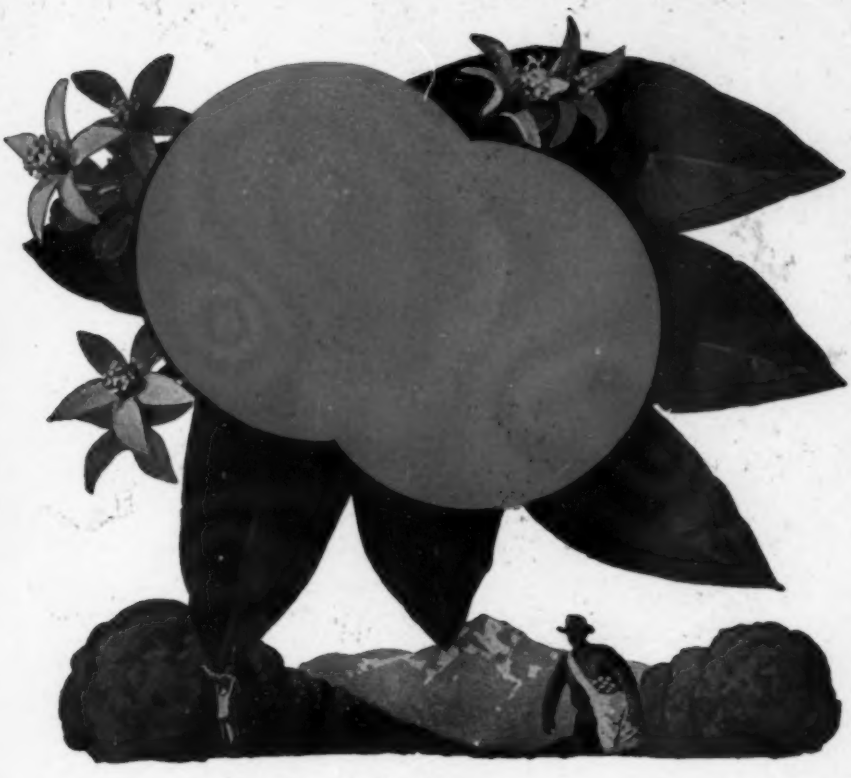

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Because it's made only of fruit from the "Sunkist" groves of California... in the largest orange products plant in the world... accepted and reordered by men and women who know orange flavor.

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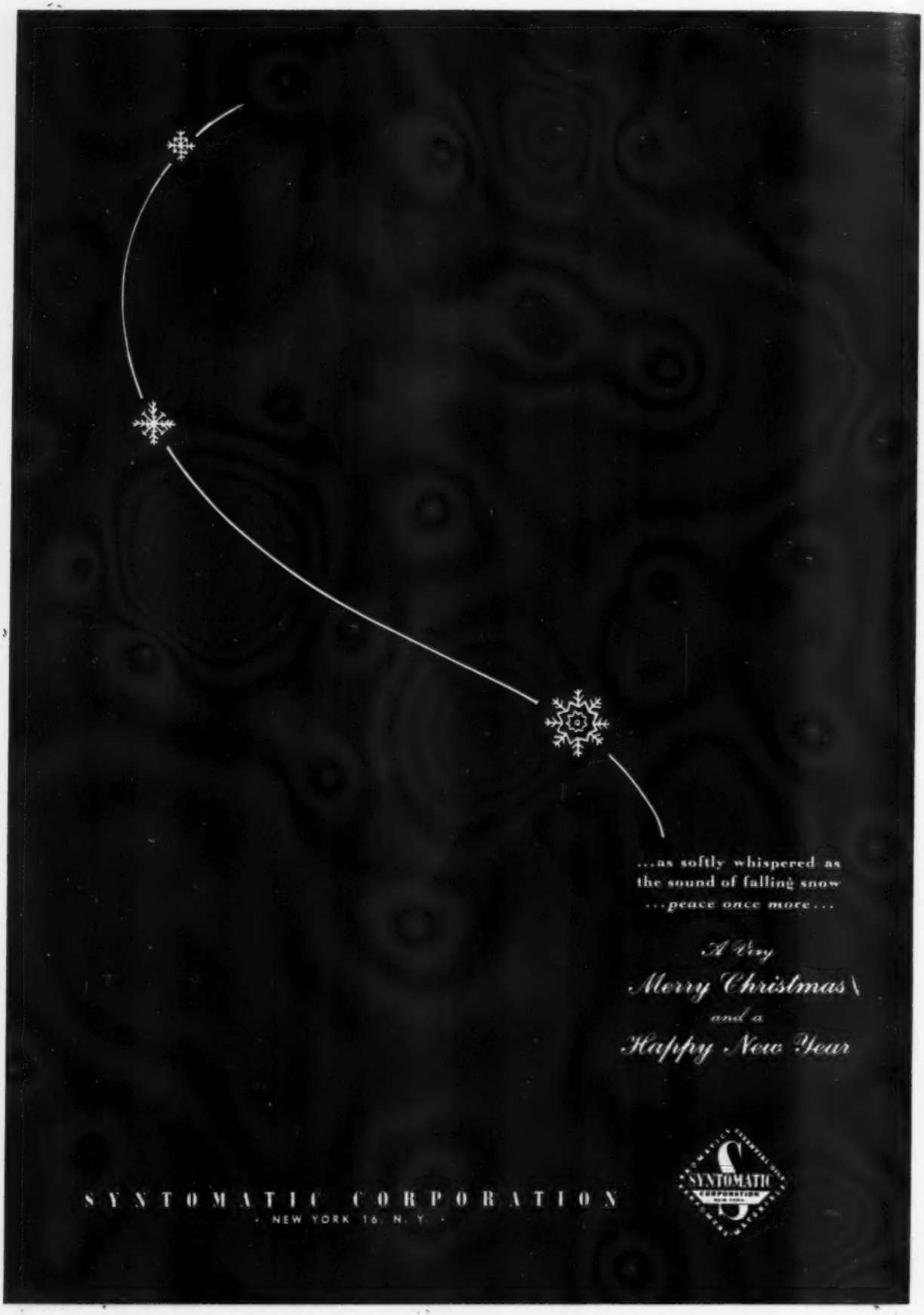
...as softly whispered as
the sound of falling snow
...peace once more...
A Very
Merry Christmas
and a
Happy New Year
SYNTOMATIC CORPORATION
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Hooker Acid Chlorides Meet a Wide Range of Needs

WHILE the Hooker chemicals listed below are all acid chlorides, their properties and characteristics are such that among them you will find chlorinating agents and intermediates for the manufacture of dyestuffs, plasticizers, and a wide variety of other organic compounds. Whether you work with soaps or dyes, with pharmaceuticals or lubricants, if you use chemicals, some of the acid chlorides may make your work easier.

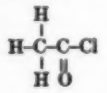
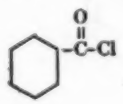
Brief descriptions and some of the uses of these acid chlorides are given below. Technical Data Sheets and samples will be furnished when requested on your letterhead. For more information consult our Technical Staff for help on how Hooker Chemicals can solve your specific problems.

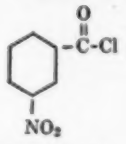
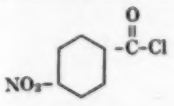
HOOKER RESEARCH *Presents*

TETRAHYDROFURFURYL OLEATE

$CH_3(CH_2)_7CH{:}CH(CH_2)_7COOCH_2OC_4H_7$

Here is a recently developed Furfural derivative that is winning a place for itself in the plastics field. Chemists working with plastics will find this Hooker chemical an excellent plasticizer for imparting flexibility at low temperatures to polyvinyl chloride. It is also used as a plasticizer with other film-forming materials. It is a yellow to light brown oily liquid. Boiling range at 16 mm is 200° to 285°C. It is insoluble in water, soluble in alcohols, esters, ketones, hydrocarbons and chlorinated solvents. Tetrahydrofurfuryl Oleate is now available in commercial quantities. Samples and Technical Data Sheet 343 will be furnished gladly when requested on your letterhead.

PRODUCT *Chemical Formula and Molecular Weight*	DESCRIPTION & USES
Acetyl Chloride CH_3COCl; 78.5 	Clear, colorless to pale yellow liquid. B. R. 5° incl. 51°C. To introduce acetyl group into organic compounds. Manufacture of intermediates, dyes, and pharmaceuticals. Reagent in manufacture of sulfonated fatty bodies.
Benzoyl Chloride C_6H_5COCl; 140.5 	Clear, colorless liquid. Boiling point 198°C. To introduce benzoyl group into organic compounds. Manufacture of benzoyl peroxide, benzophenone, benzyl benzoates, synthetic perfumes, dyes, pharmaceuticals.
Carbonyl Chloride (Phosgene) $COCl_2$; 98.9 	Liquified gas. F. P. -126°C. B. P. 8.2°C. Manufacture alkyl and aryl chlorocarbonates and dicarbonates; Michler's ketone; dye intermediates; metal chlorides and anhydrides; pharmaceuticals; perfumes.

PRODUCT *Chemical Formula and Molecular Weight*	DESCRIPTION & USES
Metanitrobenzoyl Chloride $C_6H_4NO_2COCl$; 185.5 	Yellow to brown liquid partially crystallized at room temperature. Last crystal point 28° to 31°C. Manufacture of dyes for fabrics and color photography; pharmaceuticals.
Paranitrobenzoyl Chloride $C_6H_4NO_2COCl$; 185.5 	Yellow crystalline solid. M. P. 70°C minimum. Manufacture of novocaine; dyes.
Sulfuryl Chloride SO_2Cl_2; 135.0 	Light yellow liquid. B. R. 2° incl. 69.1°C. Reacts with organic acids to form other chlorides and anhydrides. Chlorinating agent to produce chlorphenol and other chlorination reactions in organic synthesis.
Thionyl Chloride $SOCl_2$; 119.0 	Clear, yellow to red liquid. B. R., refined grade, 75° to 78°C. Manufacture organic and chlorides and anhydrides, alkyl chlorides from corresponding alcohols.

Butyryl Chloride **Caprylyl Chloride**
Propionyl Chloride **Pelargonyl Chloride**

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ARMY E NAVY

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8325

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Both Oculine's product and the handsome ARIDOR cap which sure-seals the package live up to that description. A pleasant—but strong—reminder of the trademark and brand name reimpresses itself on the user each time the one-spin-and-its-on-or-off ARIDOR cap is removed or applied. Let ARIDOR show you how your caps may be *EYEdealized* to give your package that "Easy-on-the-Eyes" selling appeal.

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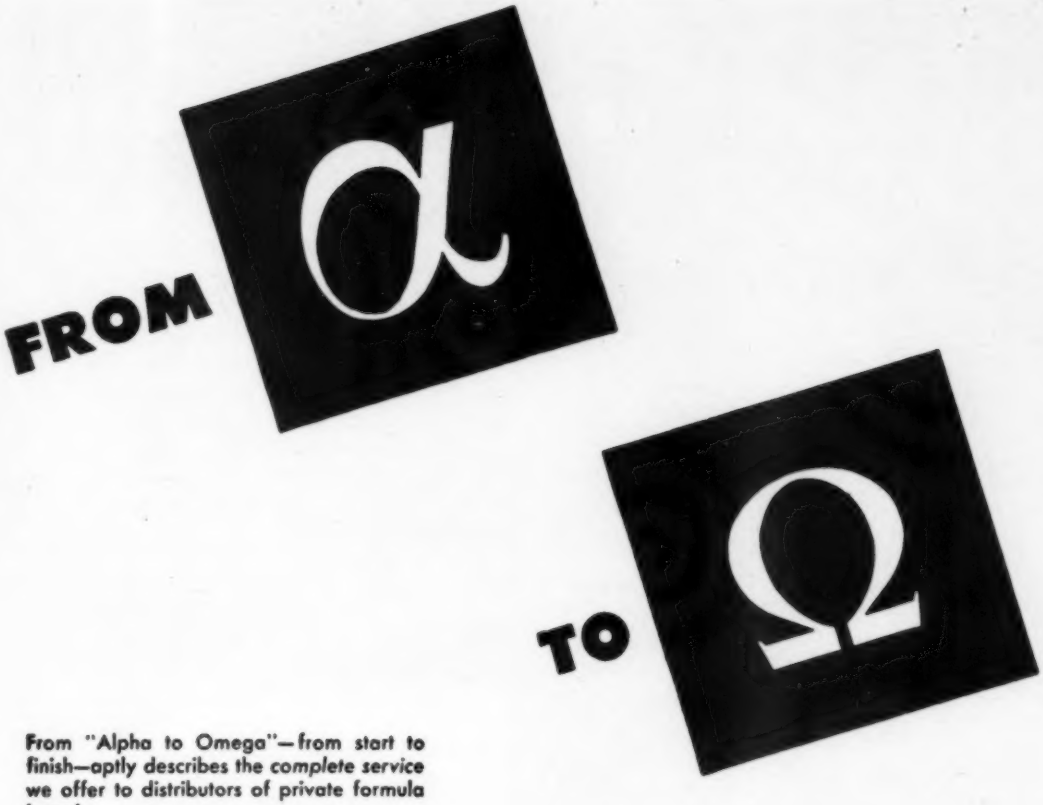

From "Alpha to Omega"—from start to finish—aptly describes the *complete service* we offer to distributors of private formula brands.

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After careful study of your problem, our pharmaceutical staff makes suggestions concerning potency, choice of vehicles, excipients, disintegrating materials, etc.

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The form your product should take is thoroughly investigated from the viewpoint of efficacy and sales potentialities.

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For many years, distributors of fine drug products have assured the purity and potency of their brands by entrusting their production to Strong Cobb & Co. —specialists in pharmaceutical manufacturing.

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Our highly trained laboratory staffs select samples at each stage of the manufacturing process—from raw materials to finished product—making certain that they conform to your exact specifications as to active ingredients, pH, moisture, color, weight, taste, odor, and other relevant characteristics.

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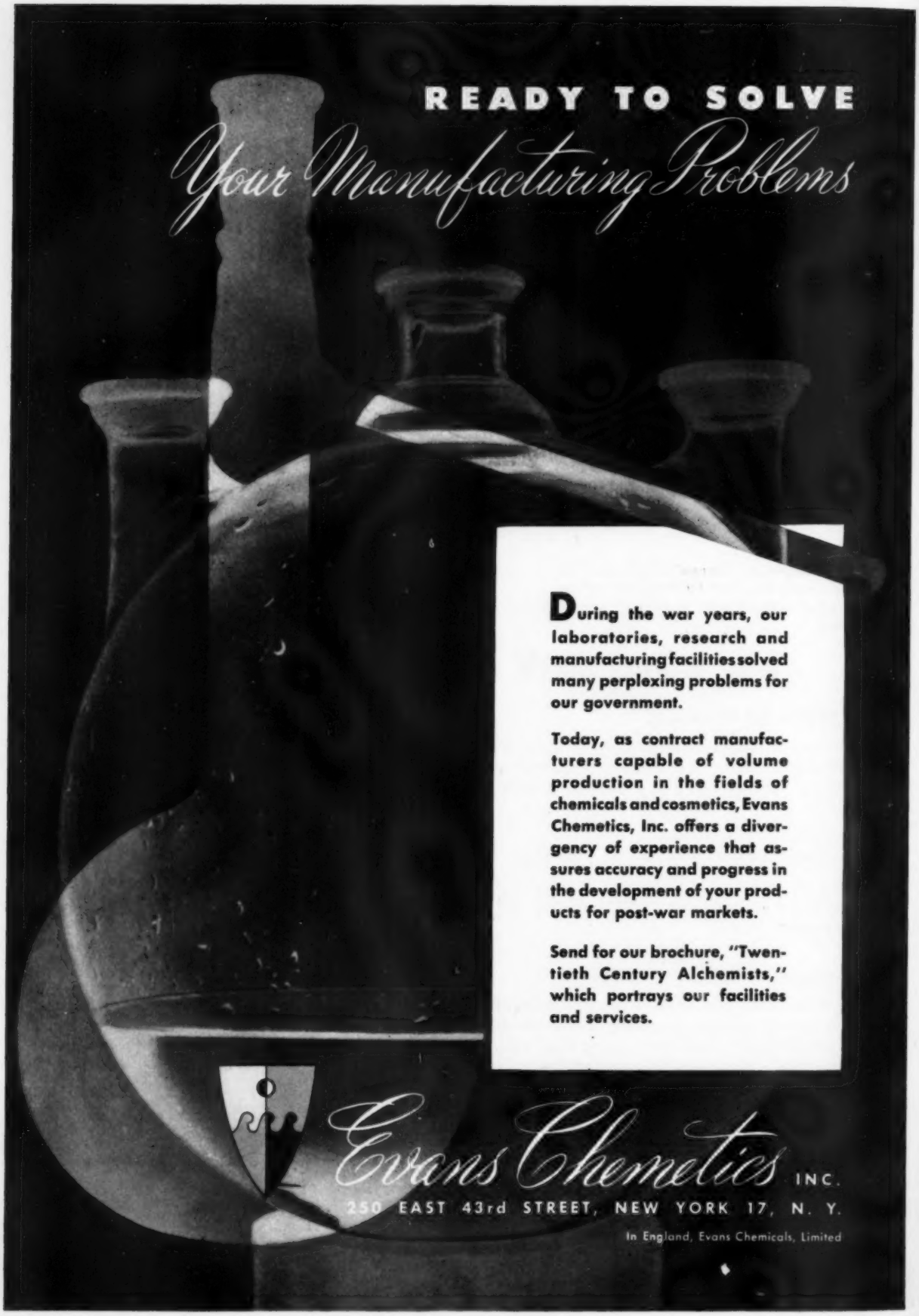
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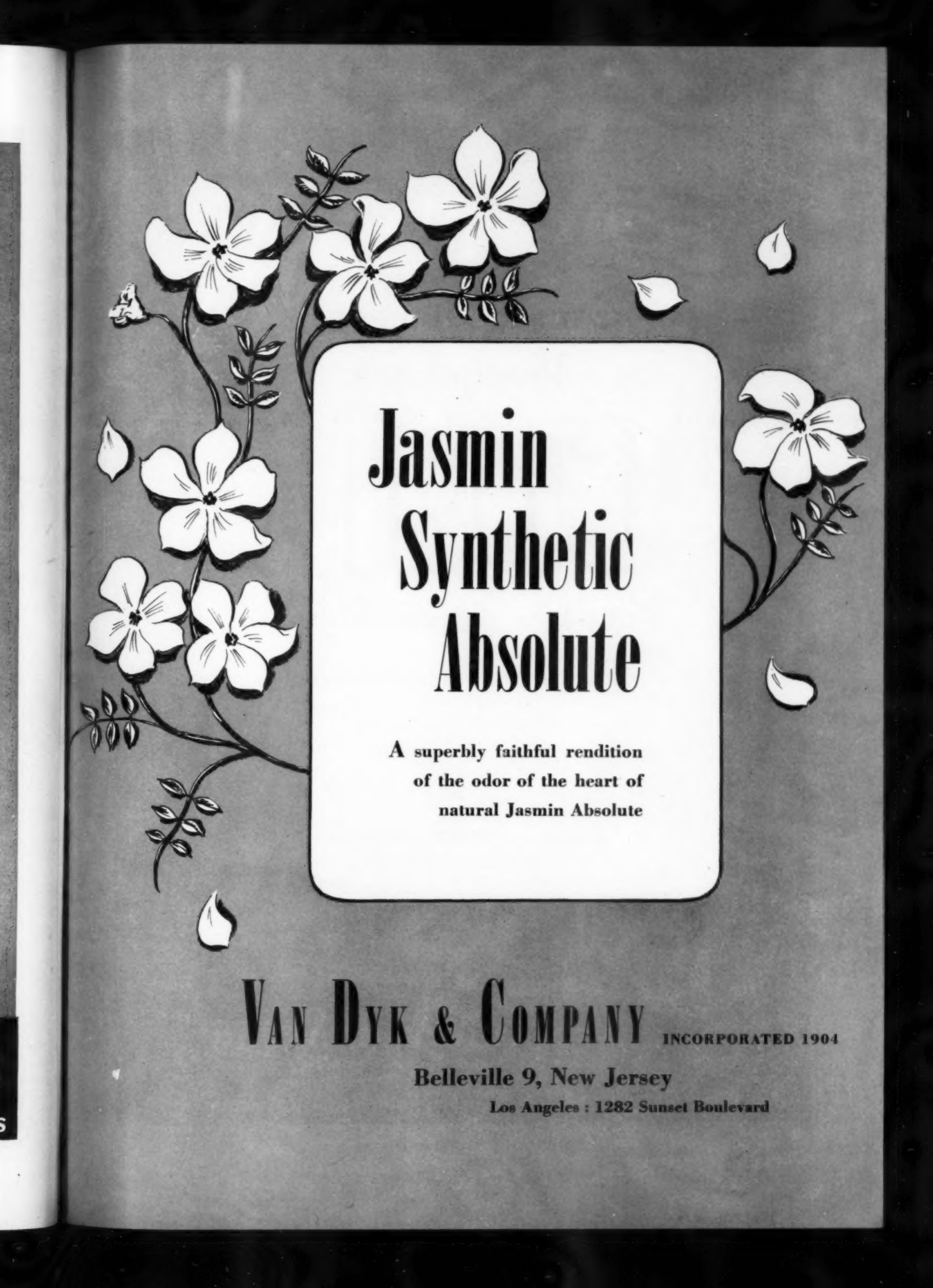
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In this first Yuletide of peace, following the bitter years of war —

We are glad to pause and extend our heartfelt best wishes to all our friends, both far and near.

May we pledge our best efforts towards greater fellowship and friendly cooperation — not only to those we are privileged to serve, but to our contemporaries and friends throughout the industry.

And may 1946 move steadily forward to sound prosperity and increased happiness for the people of all nations.

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Heyden Chemical Corporation, New York, N. Y.

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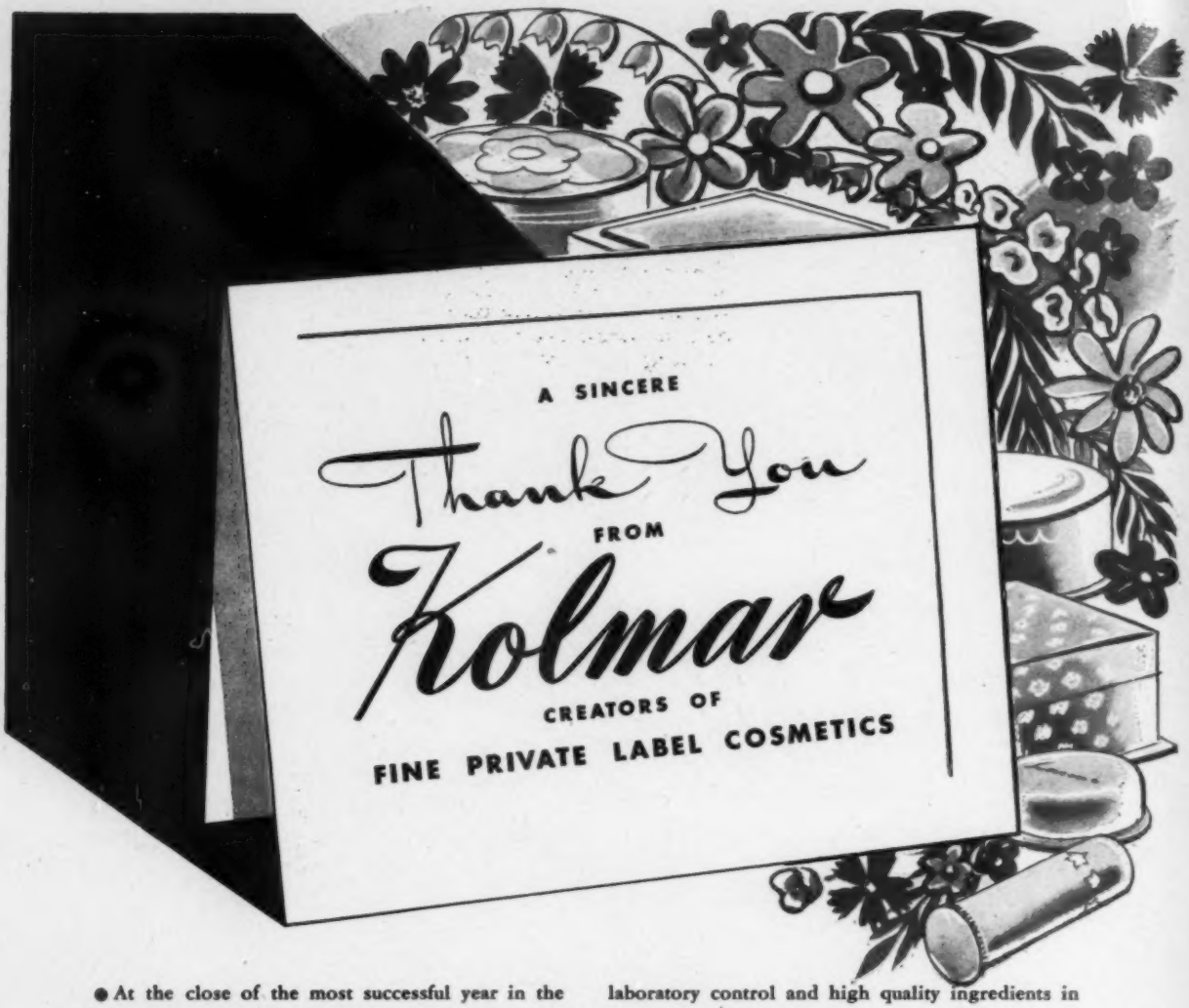

● At the close of the most successful year in the history of Kolmar Laboratories, we express our sincere appreciation to the many loyal friends and patrons who have helped make this success possible. It has been our pleasure to serve you, and in doing so we have always taken advantage of every opportunity to improve our service and hold our products to the uniformly high standard of quality expected of the world's largest makeup specialists.

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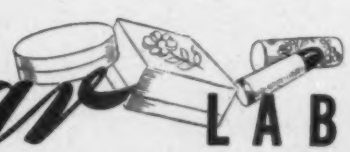

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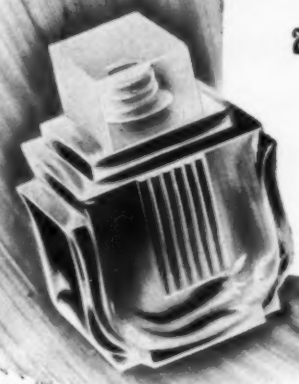
when you

Solubilize Perfume Oils

with

ATLAS G-2160



ONE of the big advantages of using G-2160 as a solubilizing agent for perfume oil is that it generally gives you a sparkling clear "solution" that requires no filtration.

That means a saving of time, labor and oils. It means a "solution," too, of higher-than-average clarity.

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This freedom of choice brings other advantages in turn. For instance, when you use a low percentage of alcohol in the formula, the perfume itself has a fuller bouquet. Moreover, the drying effect which results from a too-liberal use of alcohol is eliminated. (Atlas Tween 20 and Atlas G-2160 both have an emollient effect rather than a drying effect upon the skin). Lastly, the permanence of these solubilizers acts as a fixative for the perfume.

The record shows that many face lotions, colognes, alcoholic hair preparations, high perfume oil content lotions and after shave lotions have been simplified and improved in formulation by the use of Atlas G-2160 and Atlas Tween 20. If you have a problem involving solubilizers, Atlas will be glad to talk it over with you.

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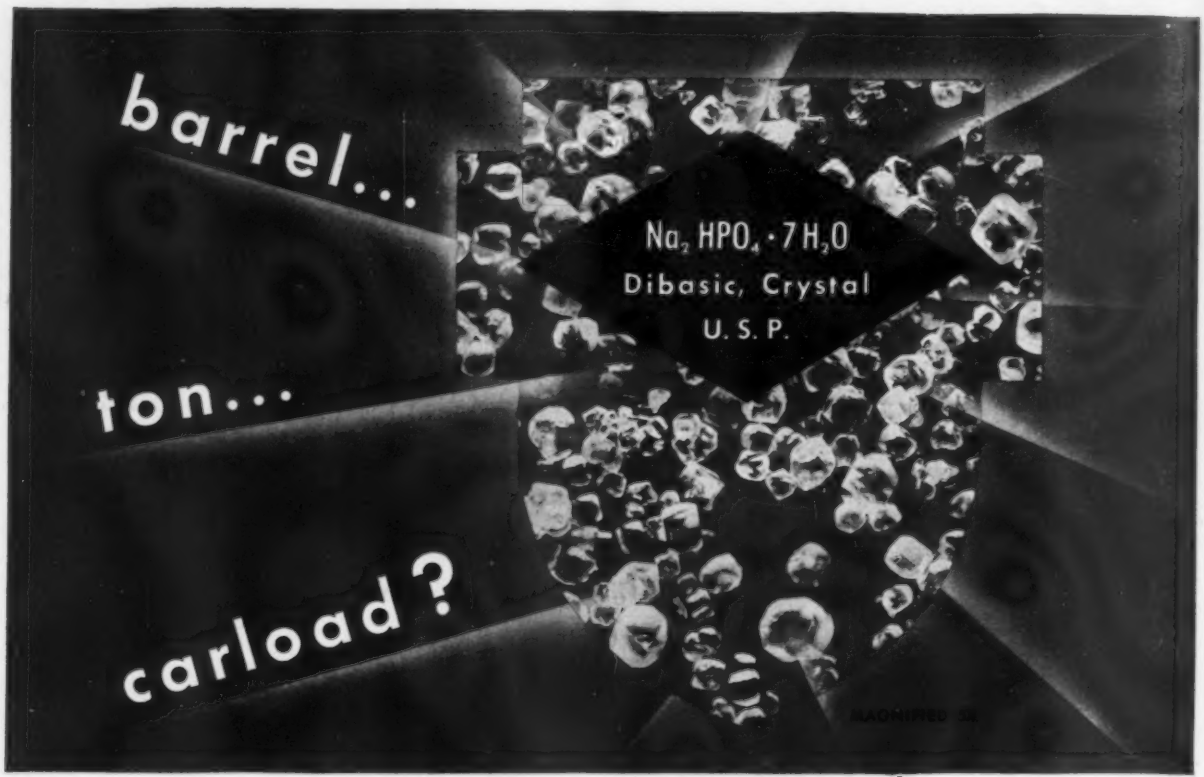

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KEEPING POSTED

Our Debt and Inflation

WE have stated previously that higher wages and values of everything were essential if we were to make our national debt fit our national income. In other words the amount of taxation necessary to be raised for the cost of running the Government and taking care of our national debt can only be a certain percentage of our national income—about twenty-five per cent—or initiative will be stifled and our capitalistic system will fail. With an estimated budget of about 50 billion dollars, national income must be at least doubled from where it stood in our best prewar years and this means that wages and values of everything must be double what they were before the war.

That this is in the process of accomplishment is clearly indicated by the Government's attitude with regard to wage increases and with regard to removal of price ceilings on products from which subsidies have been removed. And recently the Federal Reserve Board stated that a total output for the country of 180 billion dollars is planned for the year 1948 which the year that will mark full transition from war to peace and full employment. This output will represent about double our normal output since in 1940 we reached 97 billion dollars and this was an all-time high brought about by production for war. It is stated that actual production of 40 per cent more than production in 1940 would mean an income of 180 billion dollars at 1944 prices due to the inflation already in effect. In other words, the output of 97 billion dollars of 1940 represents 130 billion dollars at 1944 prices. Potential demand for 1948 is estimated as follows: Government expenditures for goods and services, 30 billion dollars; consumer expenditures, including deferred demand, from a low of 122 billion to a high of 126 billion dollars; housing construction, from 5 billion to 6 billion dollars; inventory accumulation, from nothing to 2 billion dollars; net exports, from 3 billion to 4 billion dollars; and plant and equipment, from 13 billion to 19 billion dollars. With an output of 180 billion dollars, the Board figures disposable income, or income after taxes at 135 billion dollars. This means that taxes will total 45 billion, or 25 per cent of the income.

What Are Tonics?

TONICS are a class of medicines that repeatedly are discussed by officials of the Food and Drug Administration and as the officials change and the practice of medicine progresses, varying opinions of tonic are developed. Recently an FDA official objected to the inclusion of strychnine in a tonic unless the preparation was labeled as a "strychnine tonic", because he was of the opinion that a consumer should be informed that he is using a product that might be poisonous under some conditions of use. Then these officials raise the question as to whether or not strychnine actually possesses tonic properties, and what are tonic properties anyway? These officials are trying to discourage the use of strychnine in preparations intended for self-medication, contending that there are other types of bitter ingredients that could be used in such a product which would also be of value. When questioned as to a tonic containing gentian, the officials stated that they would have no objections to referring to such a product as a bitter tonic, and they thought that all tonics should be called "bitter tonics."

FDA officials seem to feel that the word "tonic" is out of date and they question whether or not modern medical opinion would substantiate the view that certain types of preparations do have an effect upon the general system, or a tonic effect. They seem to feel that the layman may be deceived concerning the value of preparations known as iron tonics, although they admit that products containing a therapeutically significant amount of iron would be of value in increasing the hemoglobin content of the red blood cells. It seems that FDA officials are constantly in a quandry regarding products called tonics. However, a great many people buy tonics and use tonics and get benefit from them. Also modern doctors practicing all ages of people from children to real oldsters many give their prescriptions for preparations which they refer to as tonics. Perhaps the FDA officials should ask the doctors what the word tonic means and what should be included in them.

Control of Barbiturates

STRINGENT control of barbiturates is proposed by the New York City Department of Health because of the increased use of these products for suicidal purposes. While it is true that the use of these products for self-inflicted death has increased measurably, much of the publicity given to their danger is quite unfair and really ludicrous. Recently we read an article in a widely circulated Sunday supplement which stated that many people who died from overdoses of barbiturates really did not intend to commit suicide but became forgetful—because of the properties of the drug—as to how many they had taken and therefore took so many that they died. However, barbiturates now stand in disrepute and more stringent regulations appear inevitable, particularly in New York City where suicides from these tablets receive wide publicity. So let us see just what type of control is proposed. The following are the provisions:

Barbiturates can be dispensed only on written prescriptions of doctors, dentists, podiatrists, or veterinarians. No barbiturate prescription shall be renewed or refilled unless the doctor, dentist, podiatrist, or veterinarian indicates on the prescription that it may be refilled, and unless he marks on the prescription the minimum interval between renewals and the total number of renewals for which the prescription is authorized. No prescription for a barbiturate shall be refilled after six months after its date of issuance. Each time a prescription is refilled, the date and amount dispensed shall be noted on the back of the prescription or in a separate file.

Pharmacists shall not reveal the content or furnish copies of prescriptions to patients but may furnish copies to doctors, dentists, podiatrists, or veterinaries. No telephone order from a physician, dentist, podiatrist, or veterinarian may be filled except in limited quantities (not more than six average doses), and in such cases the pharmacists must secure a written prescription within 72 hours.

The doctor, dentist, podiatrist, or veterinarian who dispenses or distributes any barbiturate to a patient shall keep a record of such drug dispensed, showing the amount, the date, and the name and address of the patient. Such records shall be kept for two years from the date of distribution of the drug and shall be open to inspection.

Each manufacturer and wholesaler shall maintain a record available for inspection of the amounts of barbiturates received and distributed or sold by him. An inventory of the amount of barbiturates on hand on the effective date of the regulations shall be available too after the effective date, and records, which shall be kept for a period of two years, shall indicate the names and addresses of persons from whom barbiturates are purchased, and the names and addresses of persons to whom they are sold. Pharmacists shall keep a record or bills showing the amount of barbiturates purchased with the dates, names and addresses of persons of the sellers. This record shall cover a two year period, and an inventory of the amount of barbiturates available on the effective date of the regulation shall be available two months after the effective date. Possession, sale, exchange, giving away of barbiturates by persons other than wholesale druggists, manufacturing druggists, pharmacists, physicians, dentists, podiatrists, veterinarians or persons who have received barbiturates in the course of having a prescription filled or refilled, is illegal. No wholesale or manufacturer shall sell or distribute barbiturates except to persons duly registered with the New York State Board of Pharmacy or to a duly registered physician, dentist, podiatrist, pharmacist, or veterinarian.

Cosmetic Makers and the Next Convention

WE REPRODUCE in full a letter we received which expresses real concern over the changing complexion of the cosmetic manufacturing industry:

"Can you give me any inside information as to whether there will be a Toilet Goods Association convention this year? During the last few months I've had a sort of nostalgia thinking about the fellows in towns from Chicago to the Coast that I only seem to meet at conventions and get to know so well then. What's happened to Charlie Darr, Roy Root, Bill Bonyun, Pete Leube, and a bunch of others I seem to have missed since convention time?

"I sure am anxious to walk in on that crowd again but since the other night I've been what might be called 'assailed with doubt.' A good customer took me out to dinner and with this and that I finally got home pretty late and fell into so-called troubled slumber.

"Suddenly I found myself getting off the elevator and walking toward a dazzling crowd I knew to be the Toilet Goods Convention meeting in the Grand Ballroom of the Waldorf-Astoria. As I came in, Herman Brooks waved to me and said: 'Homer, you know all these folks in the perfume business,—meet Hattie Carnegie, Lilly Daché, John Frederics, and George Jensen.

"Well I said 'hello' and was walking over to see Paul Douglas when Jack Moore grabbed my arm and said, 'Homer, do you know all these folks in men's toiletries, — meet Mr. Murphy of Mark Cross, Mr. Lustig of Adam Hats, and these gentlemen from United Cigar — Whelan, and Beau Brummel Ties. I'll have to ask you to introduce yourself to those thirty or so other gentlemen because I haven't met them myself.'

"Well I saw Cecil Smith and Bill Schultz talking in a corner and when I could break away I headed in their direction. But as I passed, Joe Kehoe stopped me and said, 'Homer, here's some people in the cosmetic business, the new really important part,—you ought to meet them — meet Mr. Soandso of the Kiddie Pants Stores, and Miss Soandso of the Associated Misses and Near Misses Apparel Shops, and here are about sixteen other folks, all new to the industry, who are putting out junior and teen age cosmetics,—introduce yourself, I can't keep up with them.'

"Well I finally got over to the bar and was just going to down a triple scotch when I noticed a crowd around the door peering in. So I said to a waiter, 'Who are they?', and he said, 'I just asked—there's Mr. Tiffany, Mr. Ballantine, Henry Ford II, the President of Post Toasties, and a lot of others. I asked them were they coming in and they said they hadn't decided yet.'

"Just then, thank heaven, I woke up, but I'm afraid I'll have to face something like it pretty soon. This is why I really must know — are we going to have a convention?"

What Headaches!

EVERY so many years we run across the production figures of aspirin and we have fun figuring out how many headaches could be treated by the enormous production if all the aspirin were made up into five grain tablets, which most of it is. Well here goes again. For the first six months of 1945, aspirin production totaled 5,382,625 pounds. There are 7,000 grains in a pound, or 1,400 5 grain tablets. This gives a total of 7,535,675,000 tablets. And figuring two tablets per headache, we get 3,767,827,500 headaches for the first six months of this year. Of course the war was in full force then, but we doubt if the number of headaches has decreased since the war stopped and we believe that this number can be doubled to 7,535,675,000 headaches for the full year—and that's some headaches.

New British Antimalarials

A NEW antimalarial drug of British origin called "paludrine" was recently announced by Lord Leverhulme at the annual meeting of the Liverpool School of Tropical Medicine. Claims for the drug are that it is of much simpler chemical composition than any antimalarial as yet known, and is more comprehensive in its effects and more powerful than any previous drug. The drug is the result of research started by Imperial Chemical Industries in 1942. Potency of the drug is said to be ten times that of quinine and three times that of atabrine. It is said to have a higher protective value, and experiments suggest that it may be possible to achieve immunity as a result of its use although this aspect requires further investigation. Paludrine does not have the bleaching and yellowing effects of atabrine, and it is much more easily manufactured than this other synthetic antimalarial.

War Work Revealed

EVANS Chemetics, Inc., recently exposed the work which they performed for the Government during the war years. The extent to which this cosmetic manufacturing house converted to production for war is clearly indicated by the following quantities of materials produced:

50,000,000 tubes of gas protective ointment.
100,000 gas detector kits plus complete replacements for 300,000 kits.
15,000,000 bottles of insect repellent.
25,000,000 tubes of prophylactic ointments.
250,000 bottles anti-lewisite and medical peroxide.
1,500,000 lbs. of potassium chlorate for the Chemical Warfare Service, which made approximately 350,000,000 white smoke pots and 50,000,000 colored smoke grenades.
1,250,000 lbs. potassium chlorate for ammunition which made up approximately 100 billion shells for cal. 30, 4 billion shells for cal. 50, plus a large quantity of ammunition for small field artillery and 50 mm Navy antiaircraft ammunition.

The Evans Company, which is creator and manufacturer of cosmetics for other companies, has entered the synthetic chemical manufacturing business to a considerable extent and plans further development and expansion in this field.

German Drug Information

INFORMATION concerning the activities of the German nation in medicine are to be made available to interested persons in this country. Medical intelligence activities in Germany, largely sponsored by the Medical Subcommittee of the Technical Industrial Intelligence Committee (TIIC), and the Medical Intelligence Division, Surgeon General's Office were completed some weeks back with the return to this country of scientific investigators assigned to this work. The largest portion of information covers German developments in pharmaceutical and biological products, although important data have been revealed dealing with medical practice, dental preparations, surgical instrument manufacture, and related subjects.

Early in the year, the Drug Resources Advisory Committee (DRAC), an advisory body to the Surgeon General, U. S. Army, was requested to set up a Subcommittee on Intelligence Objectives to advise both the Army and TIIC on questions affecting the interests of the drug industry. Under the chairmanship of Carson P. Frailey, this group contributed greatly to the success of the project through its advice on the selection of investigators and on the most desirable procedures for the dissemination of information obtained.

The TIIC was originally organized to obtain technical information from Germany which might be useful in the further prosecution of the war, but in keeping with the Government's policy of liquidating war agencies as rapidly as possible, this agency has been dissolved. Responsibility for all reports, documents, and exhibits in the hands of the Medical Subcommittee, TIIC, as well as its residual activities, have been assumed by the Medical Intelligence Division, SGO. Major John A. Purinton, formerly Steering Member of the Medical Subcommittee and now on terminal leave from the Army, is continuing to assist in these activities in an advisory capacity.

The Subcommittee on Intelligence Objectives DRAC has carefully reviewed the question of dissemination of information as well as the most desirable procedures for making this information available to all interested persons in an efficient and equitable manner. The data are to be declassified by military authorities. Substantially all the information covering the medical and allied fields, therefore, can be made available to the public. There is a small portion that must be withheld for reasons of military security. Declassified material is being turned over as rapidly as possible to the Publication Board of the Department of Commerce for reproduction. It is intended that all documents and reports will be reproduced photographically so that scientific workers may make as direct interpretations as possible from the original material. The original copies will then be placed in the Army Medical Library as a single collection covering medical intelligence activities in Germany during World War II. All declassified material will be available to the public for reference as desired.

As duplicated copies are available for distribution, announcements will be made in professional and trade journals so that interested persons will be informed. Copies will be forwarded to the public on request, subject to nominal charges to cover the cost of reproduction. Requests for such material should be forwarded to Publication Board, U. S.

Department of Commerce, and should indicate the reports desired, giving the Publication Board's number assigned to each report.

In addition to the reports prepared by intelligence investigators, certain other documents have been brought back to this country for reference. These include books, original German documents, and microfilms of material which could not be evacuated. Because of practical difficulties, some of this material will not be reproduced at this time for general distribution. However, all such documents will be placed in the custody of the Army Medical Library as soon as they can be declassified and properly indexed and catalogued. Arrangements will be made so that this material will be available to the public for reference purposes. Announcements will be published when this is done.

Coordinated National Research

BILLS are before Congress to carry on in some way an organization—such as the Office of Scientific Research and Development headed by Dr. Vannevar Bush—that can get the most good for the most people out of research conducted in this country. Because such legislation would seriously affect the future of medicine in this country, there recently appeared before the Subcommittee on War Mobilization of the Senate Military Affairs Committee, Dr. Morris Fishbein who represented the AMA and a special committee appointed by the Joint Committee on Post-war Medical Service. Dr. Fishbein said that "Our committee favors Federal support of research safeguards. To be most effective this support should leave the policy, personnel, methods and scope of research to the colleges, universities and research institutions themselves." Dr. Fishbein summarized his statement as follows:

"The coordinated and intensified research in the field of health and medicine carried on during the war by the National Research Council in association with governmental agencies has yielded vast benefit to the people of the United States and indeed to the people of all the world. By such coordinated and intensified research invaluable time has been saved in extending the uses of penicillin and in promoting its manufacture on a large scale and availability at small cost. The number of lives thus saved is tremendous, indeed incalculable. Similar investigations in the uses of the sulfonamide drugs, in the development of the uses of blood and the various derivatives of blood, investigations in the treatment of burns, in the control of infectious diseases such as malaria and many tropical disorders, in diet and nutrition, have already all gained by application to their problems of well supported, well coordinated and intensified research.

"The American Medical Association desires to assure Congress that it appreciates the vital importance of the legislation proposed and to express the hope that an adequate measure for the support of scientific research may soon be enacted. In general, the arguments that have been presented in the Vannevar Bush report have our full approval. With slender financial support the scientific departments of our colleges, universities and research institutions have served a great purpose. Federal aid to such institutions may extend their opportunities, provided they are not so greatly controlled in the acceptance of Federal support as to limit their initiative and freedom of action. All scientific authorities are agreed that 'research is a bird that sings only when free.' Discovery requires the broadest possible liberty to search in as many places if possible, and by any means that they themselves consider possible. The recommendations of the Bush report indicate how this can be done. Those recommendations may well be followed.

"In the structural organization of the proposed National Research Foundation the recommendations of the Magnuson bill, S. 1285, would seem to approach more nearly the type of structure that has been considered suitable, since that structure is more in accord with the type of organization that has been found efficient in institutions that have been carrying on excellent projects for many years."

Post-War Business Picture

AS WE muddle through the settlement of problems arising out of the transition from war to peace, manufacturers in this industry are trying to hold on to their relative positions in the industry against the smaller producers who expanded during the war and against the new firms who entered the industry during the war. The struggle will continue for a long time to come and the outcome in individual cases cannot always be predicted. In the cases of both drug and cosmetic manufacturers who were firmly entrenched and stood well at the top of the industry before the war, swollen sales figures brought on by wartime expansion are going to be difficult to maintain, even though our national output eventually stands at a dollar volume of twice our prewar output. This is for the reason that money was spent more freely particularly on cosmetics, and to some extent on drugs, during the war period because many other things that people would have bought with their money were not to be had, and are not yet available. Another factor in not expecting a doubled national dollar output to maintain volume in this industry at such high levels is that this doubled national output represents an increase of only forty per cent in actual goods over 1940, the balance of 60 per cent increase representing higher values for products, or inflation.

Naturally as conditions become more firmly established on a peacetime basis, costs of producing goods should decline somewhat although not to prewar levels. When this occurs, sales volumes of companies will decline even though the actual amount of goods sold remains where it was which is not at all likely. As time moves along we shall enter a period of sharp competition as people become supplied with all the goods that they have long wanted but will then have. However with the return of installment buying, the purchase of heavy goods will be a long drawn out process that might place these people back in the market for the "new model" when they are paid up.

Science or Sales

EMPHASIS on the sales angle or the scientific angle in a pharmaceutical manufacturing company is a question that has many angles. Recently with those newer companies or with those companies who had not been particularly ethical in aspect but who wanted a complete new face, a scientific man or a man with entree to the medical profession was

placed in the top position. This type of position can only be filled by a scientific man who is rather a rare bird, for he must have sales and administrative ability, and if he had shown these attributes previously he would probably not have been left in the scientific end of the business long enough to become regarded as a scientist. The head of a drug manufacturing company must have a full understanding of the scientific aspects of the business and a full sense of the responsibility that is only fulfilled by giving science and research full sway, but he need not be a scientist himself in the strict sense of the word.

Salesmen and the Future

AFTER the sellers' market had become firmly established during the war years and sellers were in a constant quandry as to how to keep their good customers satisfied, most salesmen longed for a return to the days when goods were plentiful and they had to get out and hustle for business. The common complaint was: "I've always thought that I'd like to see conditions of this kind, but now that they are here I hate them." Certainly it was no satisfaction to anyone salesminded to have orders just roll in without any effort being put into the selling. There was just no sense of satisfaction to a person who was salesminded. Also it was most difficult to curtail shipments to customers who had stuck with you in the lean years when you wanted to give them all they could possibly use. Neither was there any fun in having people who never bought from you before sneaking in orders or crying their eyes out that they would stick with you after if only you would help them out of a jam—you knew they wouldn't stick anyway but you couldn't just call them liars.

But now that the war is over, the sellers' market continues for the most part although some items are in free supply. The time is gradually approaching when your customers will be able to get all they want of everything they need, but it hasn't come yet. But beyond the point when goods are freely available there will come the time when salesmen will again have to use all their sales ability and talents to move goods in large volume and we don't think that the salesmen will like that any better—or as well as they liked the severe sellers' market of the war years. We guess there's just no satisfying human beings. But the salesmen that we feel sorry for are the ones who have never sold. Every house in this industry must have numerous so-called salesmen, or men in the sales department who have been with them in this capacity only since the sold-up condition of the war years. All these men have done is to turn down or curtail orders and to allocate the supply that was allotted to them. Many of them were patted on the back and entered by their customers who always treated them with cheery smiles and made real pals of them. Wait until these fellows have to fight for the orders, we doubt that many of them will be able to stand the strain.

A.P.M.A. Scientific Award

THE American Pharmaceutical Manufacturers Association has been fortunate enough not to be interrupted in its schedule of Midyear Meetings due to the war even though they were obliged to miss one Spring meeting this year. Consequently this year at the association's midyear meeting at the Waldorf-Astoria Hotel in New York, the seventh annual scientific award is being made. This year the award goes to the Rockefeller Institute for Medical Research "in recognition of its great contributions to public health, by fundamental research in the field of the medical sciences, which is of profound and lasting value to mankind." Previous recipients of this award are: 1939 Dr. Nathan B. Eddy and Dr. Lyndon F. Small for studies of morphine derivatives; 1940 Dr. Perrin H. Long for studies of the sulfa drugs; 1941 Dr. Tom D. Spies for studies of vitamin B complex; 1942 Dr. Edward A. Doisy for discovery and studies in the hormone field; 1943 Dr. Alexander Fleming and Dr. Howard W. Florey for discovery and studies of penicillin; 1944 National Research Council for research contributions in medical sciences in peace and war.

Vitamin Dosage

AS TO therapeutically significant doses of vitamins the Federal Trade Commission recently issued Cease and Desist Order No. 2979 which included the following statement: "It is undisputed that where a deficiency of vitamin B_1 exists, the recognized minimum therapeutic dose is 3,300 International Units per day continued over such period of time as may be necessary to overcome the deficiency." Well that's one department's opinion.

Cosmetic Interests Merged

THE Toilet Goods Association and the Toilet Goods Manufacturers Association of Canada have created a joint committee for the exchange of information and to coordinate the activities of the two associations on matters of mutual interest. Members of the committee representing the Toilet Goods Association are: Norman Dahl of Prince Matchabelli, A. H. Bergmann of Oxyzn Co., and Joseph Huisking of Fritzsche Brothers. Members representing the Toilet Goods Manufacturers Association of Canada are: Thomas Haugland of J. B. Williams (Canada) Ltd., C. G. Carmichael of Lehn & Fink (Canada) Ltd., and H. T. Roden of Scovill Manufacturing Co.

Labeling Under New Regulations

THE labeling of products under the revised regulations that recently became effective has puzzled manufacturers who have products which can be used by the layman but which cannot be used by the layman in other conditions. For instance, a tablet containing three times the minimum daily requirement of thiamin would be safe for use by the layman as a dietary supplement. But this same tablet contains sufficient quantity of thiamin that it may be of value in cases of dietary deficiencies, a condition which officials of the Food and Drug Administration think should only be treated by a physician. Under such conditions the label of the product should give adequate directions for us as a dietary supplement, but while the label may indicate that it is useful in dietary deficiencies, the label must not contain directions for use in this condition. Therefore, the label of such thiamin tablets should read: "Dietary supplement, one tablet a day. For other conditions use as directed by your physician."

Socialized Medicine

The possibility of so-called socialized medicine coming to this country is much stronger today than it has been at any time. This is due in large part to the fact that President Truman has declared himself to be in favor of the latest version of the Murray-Wagner-Dingwell Bill recently introduced in both branches of Congress. While President Truman has stated that this proposed legislation is not socialized medicine, leaders of the opposition state that it is. The legislation provides for compulsory health insurance. The present bill does not provide for the payment of the cost of this compulsory health insurance, but it is believed that if the present bill is enacted, a later bill will provide the cost of the insurance by requiring further social security payments of four per cent of the employee's wages—half paid by the employee and half by the employer—to the extent of $3,600 salary. The reason why it is claimed that the bill does not constitute socialized medicine is that the subscriber to the plan—he cannot avoid subscribing if he comes under social security—has a free choice of hospitals and doctors, and that the hospitals and doctors are not forced to work under the plan if they do not so desire.

However, it is believed that if all of the people of the country who are gainfully employed are forced to pay medical insurance premiums, the result is certain to be that very few physicians or dentists can refrain from practicing under the system. And if they desire to practice under the system they will have to meet certain standards and specifications set up by the Surgeon General of the United States, who will, for all practical purposes, then be the Czar of medicine in this country. Likewise, hospitals will have to work under the system or be largely empty, and they too will then have to meet specifications set up by the Surgeon-General and therefore become wards of the Surgeon-General.

If the proposed legislation is enacted—which deemed as most likely in many well-informed quarters, a powerful political machine might readily be built up in medicine. The Surgeon-General will be the man with the final power. He will be able to decide which doctors are to become specialists, as well as many other points important to a doctor's welfare. He will be charged with providing sufficient medical facilities in all parts of the country, particularly in many rural communities which have been understaffed. Perhaps he will eventually obtain power to move doctors around the country to places where he believes they should be, much in the manner that the Army and Navy personnel are handled or the police forces of big cities.

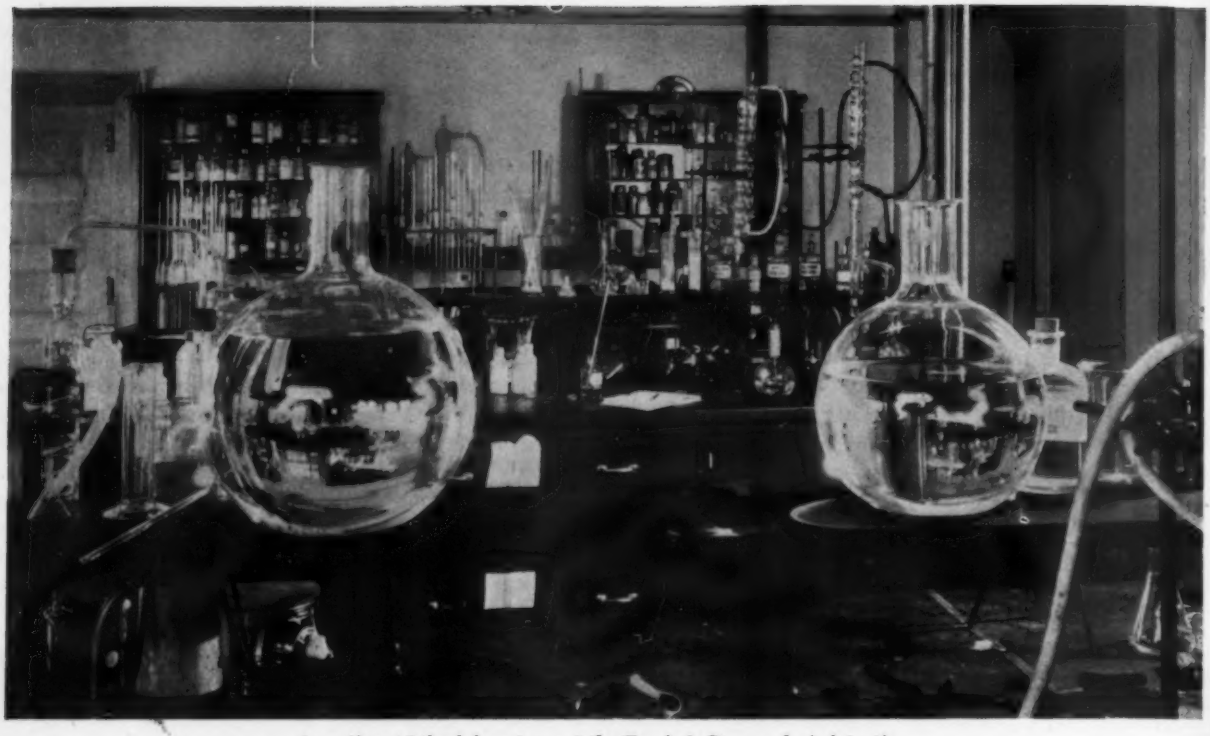
Certain parts of the legislation are very strongly favored by the medical profession. These are the parts of the legislation that provide for financial assistance to the States for the construction of needed hospitals, health centers, and other medical, health and rehabilitation centers; and Federal grants to public and nonprofit private institutions for medical research and professional education in medical and related fields. However, there is no assurance that if these parts of the legislation are enacted, that medical education and research will not also be under the supervision of the Surgeon-General. As in all such cases, the willingness to accept money from the Federal Government exists, but the control that will most likely come with the money is not desired. Any such legislation would most definitely put the medical profession in politics of the country and this appears a far from desirable thing to do.

However, there are many doctors who are perfectly willing to work under plans of this kind for the reason that by so doing they collect a large number of fees that would otherwise prove uncollectable. The country doctor type is perfectly willing to pull on his trousers any hour of the night or early morning no matter who calls him is the type that appreciates the three or four hundred dollars that might roll in at the end of the month from patients that would otherwise not pay him or who would force him to go to a lot of trouble to collect even part of it. Every doctor of this type has many patients to whom the sending of bills is only a waste of stationery and postage, yet these doctors will not refuse treatment to these people. Health insurance of some kind is greatly appreciated by such doctors.

The National Physicians Committee for the Extension of Medical Care has been, for several years, trying to develop health insurance through private insurance companies in the hope that a Government plan would be deemed unnecessary. They have had surveys conducted in an effort to find out the public reaction to plans that have been proposed. The latest survey reveals that but 64 per cent of the people are in favor of prepaid medical plans, while 77 per cent feel that something can be done to ease the financial strain of medical expenses. About 45 per cent were in favor of the Government sponsored plan, while 43 per cent chose the privately owned insurance company plan. About

42 per cent contended that a Government plan would involve too much red tape and political influence, and 24 per cent preferred to be free to join or stay out of private plans and 22 per cent said that doctors and insurance companies would do better work in open competition of non-government plans. However, one very strong argument in favor of the Government plan is that it would be compulsory for all coming under social security and that therefore the desired end of health insurance for the very large number of the people of the country would be accomplished. There has been no consideration of making health insurance compulsory either through the Government or through private companies so long as the insurance was in force. In New York State, and perhaps in other States, Workmen's Compensation Insurance can be placed either with the State direct or through private companies and this is helpful in keeping both of these agencies on their toes.

BROWN BROTHERS



A section of the laboratory of the Food & Drug administration.

Post-War Changes and Trends in MEDICINAL DRUGS

By E. C. MERRILL*

For several months prior to the collapse of the Axis Powers we had enjoyed an easing in the supply situation respecting crude materials used in medicinal products and with the termination of hostilities came revocation of WPB orders and restriction galore, so that today, broadly speaking, the availability of such materials is no longer the serious problem that existed during the years of 1943 and 1944 and the early part of the current year.

Reversing the question of earlier days as to "What materials are available?" now becomes "What materials are short in supply?" With the exception of sugar which broadly affects all consumers to a degree, the actual shortages are few and limited in number.

Saccharin sympathetically affected by sugar shortage becomes in high demand in the form of tablets as a sweetening agent. Products formerly procured from East Indian sources such as cinnamon, benzoin, anise, cassia, etc., still remain difficult. Caffeine and theobromine reflecting high demand and shortage of primary materials such as press cake from cocoa beans has created a tight situation. Also many vegetable oils especially linseed, cottonseed, coconut and several others are short in supply.

But in the main the rapid transition of freer availability of crude materials has prompted an equally

*Before the mid-year meeting, Scientific Section of the Proprietary Association of America, Biltmore Hotel, New York, December 5, 1945.

active trend in the abandonment of numerous substitute and alternate materials employed in the formulation of numerous medicinal products, and a return to original pre-war formulation where practicable. I have in mind particularly those broad shortages in alcohol and glycerine which affected a wide range of finished products where actual curtailment of their use in manufacturing became necessary, but which have since become more freely available.

Alternate materials for vehicles such as propylene glycol and isopropyl alcohol were to a large degree replaced with alcohol when it became available, by reason of its preferred inherent physical characteristics from point of odor and taste. Similarly glycerine has returned to displace many substitute materials which were tried when glycerine was scarce and difficult to procure.

Other materials that were difficult in the war period such as zinc oxide, stearic acid, cetyl alcohol, magnesium oxide, lanolin and its derivatives, affecting a multiplicity of medicinals and toiletries, have in their return to availability prompted reversion to original formulation in numerous instances where alternate materials had been employed.

And so we now have a rapid return to normalcy in formulation and production with a speed comparable to the abandonment of "gas rationing."

It is to be noted, however, that developments during the war period resulting from problems of shortages and supply are not without advantages gained by this experience, and in certain instances there have resulted revolutionary changes in the manufacture of medicinal products.

Oddly enough, those materials that were difficult to obtain because they were in extremely high demand for military needs, have now become the most freely available materials because of the high productive capacity created for the war demand. This condition we note in the case of many of the sulfa drugs, aspirin, barbiturates, and others.

And in the field of synthetic vitamins production demand appears to have passed its peak at least for the time being.

Coincidentally, has the price structure of such materials yielded to the "age-old" law of supply and demand, in the case of menthol, peppermint oil and numerous materials required in large quantities by the Armed Forces prior to the cessation of hostilities.

Passing to the official products such as are contained in the standards set by the U.S.P. and the N.F., we now are in the process of reviewing monographs representing revisions which are being prepared by both Committees of the Pharmacopoeia and the National Formulary for new editions of these standards known as U.S.P. XIII and N.F. VIII. I will not discuss the details of the revisions and policies behind the changes being made in both these standards for official products, but rather the broad trends that have been continuous throughout the numerous revisions dating back to the period known as the "Gay Nineties." Here we see a beginning of an evolution in many of the official products which, as we trace their course throughout respective revisions to the present time, we find a slowly accelerating and continuing trend away from natural products to the highly refined and concentrated medications; to the accelerating development of synthetic principles that have replaced many tinctures, fluidextracts and elixirs. Also in the light of newer knowledge in therapeutic action we find there have gone numerous botanical drugs the usefulness of which have been supplanted by more effective products.

This again raises the question concerning certain of these botanical drugs about which so little is known regarding either their active principles or their therapeutic values such as has been indicated in Dr. Cullen's viewpoint that further research in this direction would be in order.

Likewise do we see a trend to presentation of medication in more concentrated form in standard individualized dosage such as we have in the case of tablets, capsules, ampules, etc. Because of the convenience of use and accuracy of administrations the trend has broadened to the classes of products mentioned above and we note a gradual discontinuance of numerous liquid products such as syrups, elixirs, tinctures, fluidextracts, etc.

But as we reach the period dating back ten years, we find a much more rapid change to synthetic principles as exemplified by the many vitamin factors that have been synthesized. Comparatively, the acceleration in this direction becomes exceedingly rapid.

The reason for this accelerated trend does not appear strange when we consider the intensive research that has been going on during this period. Also as we entered the war period there came the still more urgent demand for the newer chemotherapeutic agents, the antibiotics, the antiseptics, the antimalarials, etc. Research became more intensive because of government demand, and it was equally spurred by the funds made available for such a purpose through the provisions of the Federal corporate tax laws whereby research expense becomes a deductible item from surplus earnings.

And because of these factors we have seen occur in a short space of time, a revolution in the field of medicinal agents, such as the development of the sulfa drugs, penicillin, streptomycin, atabrine, the vitamins, the hormones and so forth.

Nor has the momentum of the power of research decreased, but rather has it become more intensified as revealed in the almost daily announcements of enlarged staffs of researchers in industrial laboratories and elsewhere. The improvements made in the already established products of penicillin give evidence that the long road of research holds promise of many valuable developments in this direction as an ally of the equally promising streptomycin.

Not alone has the field of preventive medicine relied upon its specialized serums, antitoxins, chemotherapeutic agents, antibiotics, etc., but we find this field

broadly expanding through the more recent developments in the control of insects, a source of infection responsible for three hundred million cases of malaria in the world today,[1] not to except yellow fever, typhus, bubonic plague, cholera, dengue, sand fly fever and other diseases in which the mosquitoes or flies, lice and other insects play a vital role as carriers of the infection.

We have all read of DDT and the spectacular part it played in controlling the outbreaks of typhus in Naples during 1943 of the recent war, under the direction of the U. S. Typhus Commission. Likewise we know of the aerosol bomb containing pyrethrum which was used successfully to eradicate mosquitoes and numerous insects in tents and barracks of the Armed Forces throughout the world. Quoting Brigadier General James Stevens Simmons, "Wartime Importance of Tropical Diseases", *Scientific Monthly*, Dec. 1944, Vol. LIX, No. 6.

"The development of new and more effective insecticides and insect repellents has constituted one of the most important parts of the Army's preventive medicine program. Through the assistance rendered by the research agencies of the nation, we are now armed with a number of effective new weapons. These include potent insect repellents, the freon-pyrethrum aerosol bomb, methyl bromide for delousing clothing, and, finally, the greatest of all, DDT, for use both in the control of lice and mosquitoes. The basic research and development for military purposes of the four items just mentioned was conducted by the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture. The discovery and the field application of DDT to the control of insect-borne diseases, will, in my opinion, prove to be the outstanding medical advance made during this war. It will exceed even penicillin in its ultimate usefulness in the preservation of health and the saving of human lives."

Similarly we have learned of numerous other newer potent insecticides which have demonstrated a greater growing usefulness in the eradication of flies, mosquitoes, lice and other forms of insect life oftimes the cause of numerous forms of epidenic disease. It seems peculiarly fortunate that these developments come at a time when air travel becomes one of the major means of transportation, where potentially, insect infection could be carried from one continent to another overnight except for these valuable contributions in elimination of such forms of insect life from transcontinental carriers.

Packaging

Turning to the field of packaging and finishing in which such materials as glass, tin, paper, lead, plastics and aluminum play an important part, we find the overall picture considerably more difficult in supply than the materials used in the manufacture of medicinals.

Tin because of its continued shortage and restricted use has impelled a curtailment in numerous tin plate containers and collapsible tubes, resulting in a correspondingly heavier demand upon the glass manufacturers for substitute containers. Consequently have the bottle and glass container manufacturers been compelled to exert maximum effort to meet the demand. Likewise has the tin plate shortage developed ersatz containers, for non-food use, for such technical materials as oils and paints where coated and laminated paper containers have served their purpose during the war period.

Much research to conserve tin by the use of thinner coatings produced by electrolysis methods have resulted in substantial conservation especially in non-food packs. Also has the organized salvage of tin by reclamation from used tin cans been an important factor in maintaining sufficient supply to win the war, but the freer availability of tin would appear to depend primarily upon the speed of recovery of production equipment in the Malayan and Dutch East Indian tin fields.

Aluminum

Aluminum as a source of alternate material such as foil collapsible tubes, laminated foil, etc., and the release of this metal for industrial use holds promise of greater usefulness in the future. It has, however, been too early to realize these benefits, which necessarily must await the completion of manufacturing equipment for this purpose.

Iron and Black Plate

The release of black plate and sheet metal has given way to the continued production of metal caps for bottles and equally the production of lacquered or coated containers where tin plate had formerly been used.

Paper

Paper which has been so critical during the last stages of the war period appears to have passed its crisis of shortage and with its return to availability will undoubtedly lead to numerous developments in this field especially where its combination with various plastic and coating materials, and laminations, afford superior advantages in the form of wet strength, moisture vapor resistance, etc.

Out of the many developments in packaging for the Armed Forces, there should be some survivors for industrial use, but here again the difficult availability of numerous plastic and coating materials suggests that the program of development may be delayed.

Newer Therapeutic Agents

Lastly but most important of all we come to the field of chemotherapeutic agents and the newer developments in the field of the antibiotics. As experience in the use of these potent agents among the Armed Forces grew, there developed an increasing demand based on the successes obtained in their respective fields of usage.

The topical application of sulfathiazole and other sulfa drugs paved the way for a newer technique in the

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1. Dr. Robert Moore, Medical Internationalism, *Scientific Monthly*, 1945, Vol; LXI, No. 6

RALPH R. PATCH

He has served his industry well

By WILLIAM T. DOYLE

STONEHAM, Massachusetts is best known for its far-sighted veterans' assistance program and the E. L. Patch Company. Ralph Patch has contributed much to both.

Grey-haired Ralph Patch is one of the drug industry's most tireless workers. He along with several others have guided the industry to a new pinnacle of acceptance by government, medicine and the great U. S. public. The growth of his company parallels to a remarkable degree the forward strides made by the industry he has served so well.

The E. L. Patch Company was started in 1888 by Edgar L. Patch, father of Ralph. Its birthplace was the back room of the apothecary shop of Canning and Patch on Boston's Green Street. The elder Patch had been teaching at the Massachusetts College of Pharmacy but was persuaded by some of his colleagues to set up a business manufacturing pharmaceuticals to serve the medical profession. The original policy of the company was to make every kind of fine pharmaceutical required by the physician. Distribution was pretty much limited to New England and New York State.

In the summer of 1906, Ralph Patch entered his father's business. His background had been four years at the Massachusetts Institute of Technology where he majored in civil and sanitary engineering. He gave up his engineering career when it became necessary for him to carry on the business started by his dad.

When young Ralph Patch came to work for his company he found a list of six thousand products plus nearly seven thousand private formulas. It reminded Ralph of an overgrown drug store with no products selling in volume. It seemed all wrong to have so many items, few of which showed enough turnover to be profitable. But such was the practice in those days, so the young engineer had to prove his point with evidence—his father was from Missouri.

Young Patch set up a program that he felt would give him a broad knowledge of the business. First off, he went to work in the control laboratory. Here he learned about the importance of accuracy, methods and standardization. After one year of control training he spent three years in production. The four years of "inside" experience gave the MIT alumnus a broad picture that later served him well in managing the E. L. Patch Company.

After studying the inside operations of the pharmaceutical business the future Patch top executive went out "on the road" as a salesman. He learned first hand what it meant to sell and detail. By concentrating his efforts on a limited number of products with selling "hitches" he proved that more and continued volume could be maintained. Over a four year period Ralph Patch compiled enough evidence to convince his father that maybe the young fellow had an idea. Largely on the strength of his performance, the elder Patch brought his son back to the home office as sales manager.

Professor Patch watched his son's performance as sales manager with a great deal of interest. He was getting along in years and not feeling well, so as soon

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These familiar cosmetic packages represent the work of such well-known designers as Leonard, Laurence Colwell, Stahlhut, Josephine von Miklos, Enid Edson, Martin Ullman, Gustav Jensen, and Egmont Arens.

Pre-Natal Influences in Packaging

PERFUME and cosmetic manufacturers, always a super-conscious packaging industry, are more absorbed now in packaging than ever before. The immediate reason—a host of new products straining to be born, a tension of expectation for what this enthusiastic postwar world will demand. The forces which operate as a constant pressure on this industry, and which are the primary reasons for its energetic creativeness in packaging are not new—they are simply operating with new vigor as restrictions are lifted and opportunities expand.

Cosmetic retail buyers, particularly in department stores, have always expected and demanded a succession of new promotions and new packages as traffic interceptor for their department. As we approach the period when consumer purchasing levels off and the war-denuded departments in other parts of the store receive merchandise, this retail demand will increase. Revlon's current "Fatal Apple" promotion with its clever package presentation is an excellent example of the traffic interceptor which in normal times this industry produces with amazing profuseness and vitality.

Again, the package has enabled this industry to visualize to both the retailer and the consumer a new market and a new use for cosmetics. In the startling growth of men's toiletries during the last few years, there can be little question but that the package predetermined both the success of this new class field and that of the individual companies. Courtley, Sportsman, Seaforth, Old Spice, His define a new market to the retailer, a new opportunity for luxury to the consumer. Any one today, observing the packages o men's toiletries on display and aware of the original and appealing packages soon to appear, must automatically concede that the first and paramount requisite for entering this field is the originality and character of the package.

The industry is now in the process of discovering a gift market for children—a market which may well exceed a quarter million dollars annually and which will put the industry in direct competition with toys, games and books. Such lines as "Little Lady", "Sweet n' Lovely", "Baby's Breath" and others delightfully define and visualize in their packages the appeal of these gifts. One would expect, in so universally a creative and package conscious industry to discover fairly well defined procedures in package creations. While a few large companies have worked out such a procedure, the reverse is generally true. It may even be said that in the creation of a new package in most companies, anybody and everybody may participate. The rule seems to be, not executive position, but creative ability.

This is clearly brought out in an interesting study conducted by *Beauty Fashion* over the past several months. This study, which might well be called pre-natal influences in packaging, covered 48 single products or family lines in 48 major companies. In each case the package was traced from the first conception of the product to the finished package in the company showrooms.

In these 48 package creations, the following individuals participated to a sufficient extent to have their help generally recognized.

Retail Stylist	1
Beauty Editors	2
Advertising Agencies	5
Package Consultant	7
Advertising Manager	8
Retail Buyer	8
Company Demonstrator	9
Promotion Manager	11
Supply Salesman	12
Art or Fashion Director	14
Sales Manager	18
Company Purchasing Agent	23
Administrative Officers, President, etc.	43

General administrative officers, presidents, vice presidents, treasurers, general managers are obviously expected to take a keen interest and play a major part in the package for a new product, or a promotion number. In five companies they took no observable interest, certainly contributed nothing. Four of these companies were very large institutions, with well defined departments for packaging so that the package never reached executive offices until acceptance had been well assured; in the fifth an unusual situation placed development and acceptance of the package in the hands of one individual. While in 43 companies the president or a general executive exercised a veto power, in less than half of these companies did such an executive actively interest himself in the creative development or contribute in ideas or contacts to the new package. The high frequency with which the company purchasing agent appears is somewhat misleading. He rarely contributed creative ideas, but he was consulted continually on cost, availability, sources and was constantly used to procure samples and other data.

Sales managers played a more frequent part than any other department executive during this creative period. But in many companies their function is limited to retail contacts and sales management. Frequently they have neither the inclination nor are they invited to participate in the creative stages of the package. The advertising manager and the promotion manager fall into this category. Occasionally, keenly interested in packaging, gifted and artistic, they were welcomed out of the routine of their department and took an important or a predominant part.

Where an art or fashion director is employed, such an individual is the focal point of package development.

What seems most significant in this study is the observation that some one person, often with little reference to the position he occupies, is recognized as the imaginative, creative, sensitive mind of the company and on him falls the full responsibility of organizing and developing the new package. And further, it is rather remarkable the great number of times that an individual, not connected with the company except through friendship and business associates, contributes substantially and often in a major way to the definition and development of the package.

By far the most important here are the supply salesmen. Fertile in ideas, eager to help good customers, often supremely competent in their particular field, and intelligent observers of packaging in general, in several cases they were credited with supplying the original idea and much of the inspiration. It is not too much to say that in six out of ten cases one or more supply salesmen of boxes, bottles, cans etc., with the friendship and confidence of company personnel, make suggestions of material value which are never publically acknowledged.

The retail buyer, particularly the buyers of leading department stores, plays a major hidden part. He is frequently in the primary manufacturing centers, in manufacturer's showrooms in contact with sales and executive personnel. His judgment of what will sell, how it will be received by retailers and consumers is that of an expert. Some have a shrewd and imaginative mind. All are flattered by being taken into an im-

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Should Insurance Companies Sponsor

MEDICAL RESEARCH

By WILLIAM T. DOYLE

M. ALBERT LINTON

"INSURANCE company expenditures for medical research are but a pittance. Conversely, those of the pharmaceutical and drug companies run into millions."[1]

Some criticism has been levelled at the insurance companies for their apparent failure to help support medical research. It is true that in isolated cases some effort has been made by individual companies to cooperate, but until recently any real interest on the part of the insurance companies has been conspicuous by its absence.

It has been very difficult for the drug industry to understand why it should contribute an estimated $20 million[1] every year to promote a better understanding of the prevention and treatment of disease while the insurance companies, to quote one critic, "sit idly by to reap the rewards of a longer and healthier life for their policyholders." It just didn't make sense.

The writer decided to make a study of the part insurance companies should and could play in supporting medical research. It was learned that the insurance companies have felt their responsibility but legal entanglements and a lack of "know how" interfered with their taking any positive action. Definite progress was made in 1944 when the Life Insurance Association of America and the American Life Convention appointed a Joint Committee on Medical Research to study the matter of insurance sponsored-research. In its report the committee said in part: "This subject of medical research is a very interesting one to the business of life insurance. We doubt if any institution is more interested in longevity than the business with which we are connected, and yet, strange as it certainly seems in retrospect, we have done very little to help improve mortality by way of supporting medical research. We have all had requests in times past to make contributions to this or that research organization . . . and yet no individual company has the machinery to find out whether or not a given project is worthy, whether it is better than other projects, or what fields perhaps ought to be cultivated rather than the one for which the particular requests are being made."

After more than a year of study, completion of the organization of the Life Insurance Medical Research Fund with membership of 143 life companies and funds of more than $3,500,000 in prospect over the next six years, has been announced by M. Albert Linton, president Provident Mutual Life, chairman of the joint committee of the American Life Convention and the Life Association of America, charged with the establishment of the cooperative research project. Annual contributions to the fund amounting to $587,000 are the equivalent of the income at 3% of an endowment fund of $19,000,000.

To fill the post of scientific director, Mr. Linton said, it is planned to enlist the services of a recognized leader in the field of medical research. As soon as the selection has been made headquarters will be established and consideration of the grant of funds will begin.

At the outset, the fund will concentrate on research covering diseases of the heart and arteries with the purpose of supporting existing institutions in conducting fundamental research in this field. The extent of the contribution which the fund will be equipped to make in this field is evident from the fact that the annual monies at its disposal will be more than 2½ times the aggregate annual grants from foundations for research in these diseases.

Funds will also be allocated to support men who without this aid would be unable to enter the research field. These men will be called life insurance medical research fellows. Some of them will come from the armed forces, men who completed their medical studies and interneships, but who would have been unable to carry out their research plans unless given a grant-in-aid.

"Research into the diseases of the heart and arteries has been chosen as the first field for attention . . . ", Mr. Linton explained, "because of its primary importance to the public and to life policyholders. These diseases are the primary cause of death. Records show that they are responsible for nearly one-third of all policyholder deaths while, for the population as a whole, they cause approximately 400,000 deaths annually.

1. Gumpert, Martin: Medical Marketing, Oct. 1945; pgs. 14-18.

During the 3½ years of the war, deaths in the U. S. from diseases of the heart and arteries numbered nearly 1,400,000 which compares with combat deaths in all branches of the armed forces of 272,000.

"Diseases of the heart and arteries are the number one killer, but even more important is the fact that more than 150,000 people in the U. S. between the ages of 20 and 64 die each year from these diseases. This is the area in which research into the basic causes should be most effective in reducing the death rate. It is significant, too, of the need for research in this field that the amount expended for research has been less per death in this field than for any other of the principal diseases."

Recommendations for allocation of the funds will be made by an advisory council consisting of eight distinguished medical men, all connected with medical schools of universities: Dr. Francis G. Blake, dean of Yale Medical School, acting chairman; Dr. Ernest W. Goodpasture, Vanderbilt University; Dr. A. Baird Hastings, Harvard University; Dr. Eugene M. Landis, Harvard University, Dr. Robert F. Loeb, College of Physicians and Surgeons, Columbia University; Dr. C. N. H. Long, Yale University; Dr. Seeley G. Mudd, University of Southern California; Dr. C. J. Watson, University of Minnesota.

A committee of four life insurance medical directors has been appointed to cooperate with the advisory council and the fund's directors, to acquaint the council with problems of particular interest to the business of life insurance and to bring information to their organizations about the work of the fund. This committee consists of two appointed by the Association of Life Insurance Medical Directors, Dr. William Bolt, medical director New York Life, and Dr. Harry E. Ungerleider, associate medical director Equitable Society; and two appointed by the Medical Section of the American Life Convention, Dr. J. T. Bowman, medical director London Life of Canada, and Dr. John B. Steele, vice-president and medical director Volunteer State life.

Directors of the fund are: Mr. Linton, W. E. Bixby, president Kansas City Life; Asa V. Call, president Pacific Mutual Life; Col. Franklin D'Olier, president Prudential; Leroy A. Lincoln (vice-chairman), president Metropolitan Life; James Lee Loomis, chairman Connecticut Mutual Life; C. F. O'Donnell, president Southwestern Life; T. A. Phillips, president Minnesota Mutual Life; George Willard Smith, president New England Mutual.

Cooperative action by the life insurance companies to support medical research may appropriately be called a "natural," Mr. Linton pointed out. No other business is more interested in the prolongation of human life and reduction in mortality not only helps reduce the cost of insurance to policyholders but at the same time serves them by lengthening their lives.

According to the Fund chairman, individual insurance companies find it difficult to determine how to apply possible research monies so that they will do the most good. Very few companies have the personnel to sift applications for assistance, or the resources to accomplish much in the support of research projects. It is believed that the approach to the problem should be cooperative, thus assuring an adequate fund and making it possible to obtain the services of qualified medical men to recommend the allocations of funds to specific projects.

"What, for example, are the basic causes of rheumatic fever, high blood pressure, and hardening of the arteries?" Mr. Linton asked in explaining the research project. "Once light is thrown on these questions, a great advance will have been achieved. At the same time it must be recognized that with fundamental research of this character results will probably be delayed. In other words, it would be pure luck if something of basic importance should be discovered in the very near future. We must therefore be patient and not too eager for immediate results in return for our outlay."

We congratulate the insurance companies for taking a much belated, but nevertheless important step forward. Their advisory council was well chosen. They have attracted men of broad experience and recognized ability. It is now most urgent that the post of scientific director be filled by a man who can keep his colleagues interested, and who can help pick and guide the research projects with vision tempered by great patience.

We think the members of the Joint Committee on Medical Research made a mistake in not considering an advisory group composed of prominent

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LEADING CAUSES OF DEATH IN AGE GROUPS—1943

Under 1 year

Cause of death	Total deaths	Rate per 1,000
Premature birth	34,563	12.5
Pneumonia & influenza	18,207	6.6
Congenital malformations	14,435	5.2
Injury at birth	10,990	3.9
Diarrhea, enteritis, etc.	8,756	3.1

1-4 years

Cause of death	Total deaths	Rate per 1,000
Pneumonia & influenza	5,100	.54
Accidents excluding motor vehicle	3,947	.42
Diarrhea, enteritis, etc.	1,578	.16
Congenital malformations	1,070	.11
Motor vehicle accidents	1,024	.11

5-14 years

Cause of death	Total deaths	Rate per 1,000
Accidents excluding motor vehicle	4,677	.21
Motor vehicle accidents	1,959	.09
Pneumonia & influenza	1,749	.08
Diseases of the heart	1,366	.06
Appendicitis	1,046	.04

15-24 years

Cause of Death	Total deaths	Rate per 1,000
Accidents excluding motor vehicle	10,756	.47
Tuberculosis (all forms)	7,942	.34
Motor vehicle accidents	4,522	.19
Diseases of the heart	3,152	.13
Pneumonia & influenza	2,337	.10

25-44 years

Cause of death	Total deaths	Rate per 1,000
Diseases of the heart	24,088	.60
Tuberculosis (all forms)	20,497	.51
Cancer & other malignant tumors	15,105	.37
Accidents excluding motor vehicle	13,758	.34
Pneumonia & influenza	8,634	.21

45-64 years

Cause of death	Total deaths	Rate per 1,000
Diseases of the heart	132,934	4.8
Cancer & other malignant tumors	68,954	2.5
Intracranial lesions of vascular origin	36,182	1.3
Nephritis	27,811	1.0
Pneumonia & influenza	18,878	.68

65 years & over

Cause of Death	Total deaths	Rate per 1,000
Diseases of the heart	264,062	27.3
Intracranial lesions of vascular origin	84,833	8.7
Cancer & other malignant tumors	80,305	8.3
Nephritis	61,819	6.3
Pneumonia & influenza	35,132	3.6

Leading Causes of Death—All Ages

Diseases of the heart	3.18
Cancer & other malignant tumors	1.24
Intracranial lesions of vascular origin	.95
Nephritis	.74
Pneumonia & influenza	.67
Accidents excluding motor vehicle	.56
Tuberculosis (all forms)	.42
Diabetes mellitus	.27
Premature birth	.25

Rates based on total population excluding armed forces overseas

COURTESY MODERN MEDICINE

OBESITY

By M. A. LESSER

ALTHOUGH many people think of overweight only from the cosmetic aspects, doctors often consider obesity as a disease. Representing a deviation from the normal and hence classifiable as a disease, the justification for such a view is perhaps more evident in statistics which show clearly the menace of excess fat to health and longevity.

The dangers of obesity are numerous and reach into many systems of the body. Physicians have long known and a large proportion of the alert public has come to recognize the association between obesity and certain diseases such as diabetes, hypertension, certain disorders of the heart and kidneys and various orthopedic conditions.[1,2] Put another way, obesity is a definite disadvantage to the heart, to the peripheral circulation, to the respiratory system, to the digestive system, to the skeletal system and to the pancreas.[3] In addition to being a menace to health, overweight contributes materially to fatigue and physical discomfort.

It stands to reason that an excess of inactive fatty tissue throws an added burden upon many vital organs. The heart and circulatory system, for example, may, in time, be severely damaged by the extra strain required to supply blood to masses of inert fat. Long known and statistically confirmed is the observation that high blood pressure is far more common in the obese than in those of normal weight.[4] The fact that diabetes is thirteen times more common in those who are appreciably overweight points to a strain upon the pancreas—source of insulin. Gallstones are not only more frequent in the obese but are also more difficult to remove surgically in such individuals.[5]

Of course, many other instances could be cited to show how obesity places a person at a disadvantage physiologically. Especially significant, however, are mortality figures. Statistics are available which indicate that life expectancy of obese persons is less than that of people of normal weight. Grafe[6] has found that if the age of 40 is taken as the starting point, the chances to reach the age of 80 are only one-third as favorable in the obese as in those of normal weight. Obese octogenarians, he notes, are great rarities.

Life insurance companies recognize these dangers and have figures to substantiate them. Such organizations are therefore, reluctant to place standard insurance on people with more than moderate overweight and, where weight is excessive, insurance has been refused altogether. From this it becomes obvious why at least one leading insurance company classifies overweight as a "very serious disability."[7]

In the opinion of many authorities, weight alone is a poor measure of obesity. Weight charts, based upon the averages of numerous individuals, fail to take into account important individual variations.[8] Nonetheless, they serve as useful guides, provided their limitations are recognized. According to Sevringhaus,[3] all the tables that are in current use in medicine are based on the concept of allowing variation of at least 10 per cent above and below the average figures given. Of decided interest in this connection are insurance studies[7] which indicate that weight slightly above the average is favorable up to about the age of 30 or 35 years. At older ages, optimal results are shown where the weight is somewhat below the average; with the advantage of underweight increasing with age.

More frequently attempts are being made to devise systems that will provide more indicative information, especially with regard to individual variations. Thus, some workers[4] employ a ponderal index (e.g. weight divided by height) as a measure of relative overweight. Others[9,10] have developed a system based on specific gravity as an index of obesity; the body weight being divided by the body volume to obtain the requisite figures.

What constitutes an optimal or correct weight for a given individual remains a rather moot question. Describing height-weight tables as unreliable, Hales[11] feels that the correct weight for any person is the lowest consistent with full physical and mental vigor. In an attempt to be more specific, it has been suggested that if the number of inches above 5 feet in height be multiplied by 5½ and this result be added to 110, the "ideal" weight may be approximated in pounds.

In classifying obesity, some authorities distinguish between the endogenous and exogenous types. In the endogenous class is included those types of obesity which may be attributed to changes in metabolism caused by disturbances in the endocrine glands and other physiological dysfunctions. The endogenous type is caused by an obvious imbalance between intake and output of energy.[3]

Mr. Daniel Lambert seems to have been the world's champion fat man. He was born in Leicester, England, March 13, 1770, and at the age of 39, weighed 739 pounds. He measured 9 feet around the body and 3 feet around the leg. Illustration from "Williams' Obesity."

Although most obese people like to think otherwise, overweight in the great majority of cases is of the exogencus type. In brief, the obesity is due to ingestion of food in excess of that required for actual physiological needs. Lack of exercise and other physical activity is also a contributing factor in most instances. Indeed one writer[5] has gone on record as saying that, "Obesity can be caused by nothing but over-eating and can be prevented only by avoiding that."

This of course reduces obesity to its elementary principles. Nonetheless it is recognized that there are certain endocrine factors which definitely predispose to the accumulation of fat. Obesity is frequently linked with disorders of the endocrine glands, particularly the thyroid, the pituitary and the gonads, but it is appreciated that the number of such cases is not as great as generally assumed. It is customary, for example, to associate obesity with thyroid insufficiency. However, according to Goldzieher,[1] there is extensive clinical material which shows convincingly that hypothyroidism is not a common cause of obesity, despite the fact that thyroid medication is used effectively even in cases in which obesity is due to other factors.

The importance of the pituitary gland in the pathogenesis of obesity has received considerable attention during recent years. Pituitary obesity may start in childhood as part of the Froehlich syndrome, but it is more common at, or after adolescence, and especially in women in connection with pregnancy and lactation. The relationship between the gonads and body weight has long been known and put to practical application, as witness the increase in poundage in castrated steers and capons. Castrate or menopausal women often show marked increase in weight and declining sex function in men is often accompanied by abdominal fat deposits.

Some workers are inclined to accept the view that certain forms of overweight seem to be hereditary. While a type of body build may be hereditary, there is little doubt that environment also plays an important part.[2] This so-called hereditary factor in obesity is much doubted by those who observe that the fat child of obese parents suffers from the sin of imitating the excessive dietary habits of his elders.

During the last few years a new factor, based on the psychological or psychosomatic aspects of obesity, has been finding acceptance among students in this field. When studied thoroughly enough, many cases of obesity disclose a psychological disturbance. By a process known to psychiatrists as sublimation, the psychologically maladjusted individual often finds that a certain degree of satisfaction can be obtained in an otherwise thwarted life by indulging in dietary indiscretions.[3] It is now well appreciated that many people resort to excessive eating to overcome disappointments, fears and anxieties.[12]

Cognizance of such psychological factors has yielded good results in many cases of obesity.[13] Gray[14] has pointed out that the treatment of obesity depends more on the mind than on the body. No amount of medical knowledge, he remarks, will avail unless the patient's will power can be enlisted. Many plump patients, and probably most of them, need their will supported by insight into their personal and environmental problems.

Except for the few cases of endogenous obesity which respond to more or less specific measures, treatments of obesity to reduce excess poundage resolve themselves

into three basic categories—namely diet, exercise and drugs.

There is no question but that dietary regulation is the keystone of any regimen designed to reduce weight. At best, other measures are only supplementary.[15] Theoretically, the management of obesity is quite simple: cut down the caloric intake or increase the energy output. Actually, this is easier said than done. Since fat combustion takes place only when the quantity of food swallowed is insufficient for energy needs, it is a prime requisite that the amount of food ingested be reduced to below the energy expenditure. This daily caloric deficit is then made up by utilizing the energy units stored in the body in the form of fat. The picture has been aptly summarized by Short,[16] who said: "There is probably no type of obesity, regardless of its cause, which will not respond by loss of weight to a submaintenance diet. Such a diet is one with a caloric value less than the daily expenditure by the subject. If a deficit can be thus successfully maintained, the body is compelled to draw on its own stores of fat for heat and energy. The problem, therefore, is to maintain a continued caloric deficit over a sufficient period to accomplish the desired results.

It is not the purpose of this discussion to go into a consideration of specific diets, since this is a matter of individual requirement. Nonetheless the subject cannot be dismissed without emphasis upon the need for supply adequate quantities of certain essential substances. Proper balance is of the utmost importance in a submaintenance diet because food supplies to the body not only energy units, but also materials needed for replacement and repair as well as other substances required for metabolism.[5]

Vitamins are among the materials that require special consideration. Although most carefully prepared reducing diet aim at a balanced and adequate vitamin intake, supplements of these dietary essentials are often recommended.[17] Sevringhaus,[8] for example, feels that reducing diets should be amplified with the fat-soluble vitamins A and D. To insure against possible deficit, it has been Short's,[16] practice to add vitamin B complex in concentrated form.

Lack of balance, not only in vitamins but in other food essentials as well, is the chief fault of many of the "reducing diets" promulgated by food faddists and purveyors of "dietetic" foods.[8] Ten years ago Malmberg[18] pointed to many of these dangers in his book significantly titled: "Diet and die." In some cases this situation has not been remedied, although really effective diets have been prepared by experts for publication in lay periodicals.[19]

Although the idea is not especially new,[20, 21] a number of food products have been marketed recently for ingestion prior to the main meal. Products of this type, including tablets, candies grape juice and such, are rich in dextrose and have a high satiety value. The theory behind their use is that by curtailing excessive appetite before the main meals, caloric intake will be reduced. In many cases such prefeeding has served to dull the appetite for food.[22] Unfortunately, some producers of these products have defeated their own aims by exaggerated and unwarranted claims.

Exercise is a valuable adjunct to dietary restrictions since it furthers the output of calories and draws on the energy stored as fat. Like diet, exercise must be more or less individualized since many obese persons are physically incapable of indulging in strenuous activity. Caution is especially important in persons over forty years of age. Discretion is necessary because excessive fat places a heavy load on the heart and circulatory system, and it may be dangerous to increase this load still more by strenuous exercise. Moderate general exercise, like walking, and calesthenics which exercise the muscles of the abdomen and back, help to give tone and a feeling of well being.[23]

Passive exercise like massage and the use of baths and heat are useful in many cases. Here again the picture has been obscured by exaggerated claims for a host of special rollers, pads, garments and other passive exercise paraphernalia.[15] Some of the worst of these offenders have been eliminated from the picture and one sees fewer advertisements for so-called reducing garments which do no more than ordinary girdles worn by women to keep their shapes in place.[8]

Bathing in still a rather popular adjunct to a reducing regimen. Although some types of bath aim at increasing metabolism, in the main this type of treatment derives its chief effect through a dehydrating action. Hot mud, steam baths, cabinet baths, Russian and Turkish baths all fall into this latter category. The chief objection to this form of dehydration is the fact that the craving for fluid which follows and its satisfaction by drinking removes any little benefit that may have been obtained.[22] It is Jarman's[24] opinion that baths are of minor importance in a weight reducing schedule.

Some workers[2, 25] speak of drugs in the treatment of obesity only to discourage their employment. Nonetheless, the records show that the judicious and carefully controlled employment of certain preparations have yielded good results as adjuvants to dieting. In the main, drugs for this purpose fall into three categories: laxatives, metabolism stimulants, and appetite depressants.

Because of rigid laws, many of the products which gave drug treatment such an unpleasant reputation have been withdrawn from general, indiscriminate use. This is expecially true of saline and other laxatives which worked by hurrying food through the alimentary tract before it could be fully utilized by the body.[18] Not only did such preparations rob the body of food, but of vitamins and minerals as well. Fluids would also be lost and the resulting dehydration could be dangerous.[25] More disastrous, however, were the weakening effects of saline laxatives on the intestinal tract; often leaving the would-be reducer in a weakened and debilitated state.

While saline laxatives and the like find but little use

(*Continued on page 867*)

OTTO OF ROSE

Otto of rose is a commodity that is of great value to the perfumer. Over the years Bulgaria has been the main world producer of a fine quality product. Various rose growers and distillers of the essence had built up reputations for the qualities of their products, and their brands of otto became widely known in this country as well as in other countries of the world. But all this has been changed by World War II. For after all, Bulgaria was aligned with the Axis powers in this war and was an enemy of the United Nations. As a losing nation she has been forced to pay the price. Russia has taken over in Bulgaria and as conquering nations generally do, she has taken such goods and commodities as are available for herself to help somewhat in the collection of reparations. This is what Russia has done with otto of rose.

Russia declared a State monopoly in Bulgaria of all production, trade, and export of otto, concrete, and absolute of rose. She absorbed at prewar prices in leva all privately owned stocks in the country. This means that all the rose growers and distillers of Bulgaria no longer own their businesses or their stocks of rose perfume materials, and such stocks as they did have have been bought from them in their own currency which is sharply deflated in value as a result of Bulgaria losing the war.

Information coming from Bulgaria recently stated that Bulgaria was disposing in this way of about 7,000 kilos of rose oil, 5,000 kilos of which was earmarked for the Soviet Government in exchange for products of first necessity to be supplied to Bulgaria by the Russians. However, there was some talk of this 5,000 kilos for the Russian exchange being reduced to 1,500 kilos because of lack of Soviet outlets for the essence. It is said that the crop was never as poor as it was this year, yielding less than 350 kilos of oil. This was due to the drought and to the greatly diminished area of rose cul-

(Continued on page 871)

Changing Face Powders

Photo of Ruth Hussey, Courtesy of Metro-Goldwyn-Mayer

A CHANGE in the formulation of face powder which has been progressing slowly for some time past, now seems to be gaining momentum. The change is the result of the demand by many women for a type of face powder which gives them the same appearance after use as that obtained by the use of cake make-up. Not so many years ago women required a face powder which would impart a matte finish to the face, but which in itself would not be noticeable. At that time it was proper for "nice people" to use cosmetics but they could not be obvious about it. But with the widespread use of glaring colored lipsticks, nail polishes and other cosmetics, the necessity for trying to conceal the fact that cosmetics were used disappeared and cosmetics are now accented rather than subdued.

Then came the technicolor movies and with them the technicolor make-up, the main item coming to the cosmetic manufacturers from this change being the cake make-up. Cake make-up gives a technicolor or pastel effect that is quite unique. This is what more and more women are preferring in the appearance of their faces. Cake make-up has taken away from face powder a large part of the market, but there is still left a very large market for face powder. However, the face powders that are largely preferred are powders that impart to the face the same effect as is accomplished with cake make-up. Cake make-up lasts longer on the face than powder, but it also takes more time to apply than powder. Women are perfectly willing to spend the time to apply cake make-up if they are going into town for the day or if they are going out for the evening. However, in the morning or on a day when they are not going anywhere in particular, they prefer to apply face powder because of its ease of application.

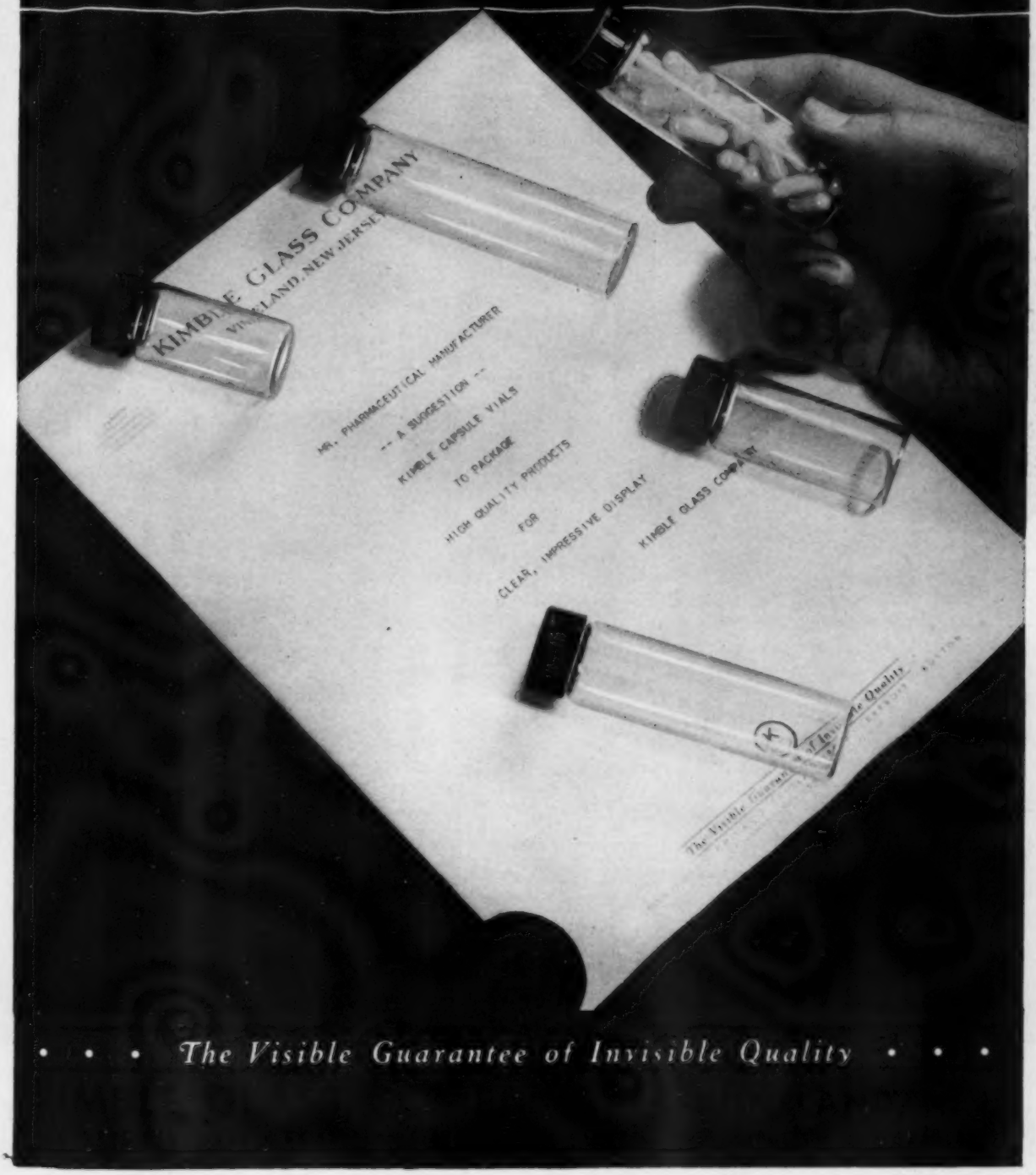
This is the reason that is behind the changes in face powder formulas that some of our leading manufacturers have been making during the past years during which cake make-up has been growing in popularity.

The main change in formulation that must be made is the addition of titanium dioxide to the powder, replacing with the titanium the zinc oxide or blank fixe which were formerly used. Zinc oxide and blank fixe, either one alone or various combinations of both are used in the ordinary face powder to obtain covering power and they impart to the face the well-known matte finish. However, the covering pigment which is used in cake make-up to obtain the pastel finish is titanium dioxide especially refined to reduce the content of lead as required for cosmetic use.

However, the incorporation of titanium dioxide in a face powder is not as simple as might be supposed at first thought. This is for the reason that in dry mixtures such as face powder (cake make-up is made as a

(Continued on page 873)

Kimble GLASS Vials



• • • *The Visible Guarantee of Invisible Quality* • • •

AGAIN... *Peace on Earth...*
to All of Good Will

HAZEL-ATLAS GLASS COMPANY, WHEELING, W. VA.

Packaging and Selling

Chiseling on P.M.'s

Every once in a while we hear about a retailer who is chiseling on P.M.'s. This is about the lowest form of larceny for it deprives the salesperson who sells the product, not the manufacturer, of the commission allowance for the sale. For example, the manufacturer may be allowing 5 per cent for P.M.'s on the sale of his product. The retailer who stoops to this practice may pocket the full 5 per cent, instead of passing it along to the salesgirl. Or, out of a heart overflowing with the milk of human kindness and a deep awareness of his own personal dignity and the integrity of his name, he may only pocket half of the 5 per cent, thus allowing the girl 2½ per cent. To put it bluntly, they are stealing from their own employees, and should be subject to the usual penalties.

The interesting thing about this nefarious practice is that it continues right through this period of wonderful business and rising sales volume. Those who indulge in it, the tax situation being what it is, must either be after figures for figures sake, or else they continue this pocket-picking just to keep their hands in.

The manufacturer in the strong position can threaten to remove his line if the full P.M.'s are not paid, but the manufacturer in a weaker spot will hesitate to pull out his line even if he finds out that the P.M.'s are being diverted to the pockets of the owner. This is one case where the strong should get together with the weak for an old-fashioned ganging-up, by which every cosmetic line would be pulled out of the store. But then somebody, most probably the petty crook who started it all, would call it a "combination in restraint of trade", and bring suit under some of the anti-trust statutes.

Men's Market (Time Version)

"Magnificently masculine...."

"There's something special about him, a hint of heather and fern that's as clean as a fresh wind...."

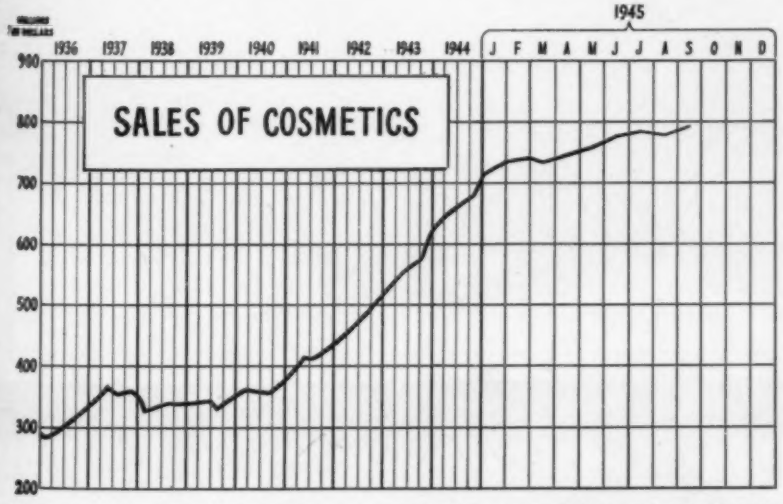
"A....refreshing fragrance as bracing and invigorating as a spring morning in the northwoods."

"In these studied bass tones, a new advertising campaign last week rose to full cry," says the Nov. 19 issue of "Time." "Its purpose was to sell the average U.S. male something he had always skittered away from buying—a line of for-men-only cosmetics, ranging from perfumes to bubble baths. In the nation's stores, bashful men fingered flashy bureau and bath sets, shaped like whiskey bottles, perfume bottles sporting horsehead corks, pictures of big game. One Midwest manufacturer crowed over a solid gold shaving bowl worth $1,875, without the soap. ("Boy, that's luxury!")

"The selling trick was to keep men's cosmetics as far away from the boudoir as possible, give them a hairy-chested appeal. Hollywood's Courtley, Ltd. said gruffly: "A shaving lotion for he-men only." (But Manhattan's Faberge, Inc. was selling a cologne: "Aphrodisia for Men.") Courtley Ltd.'s bubble baths had ruddy, full-blooded titles: "Chukker," "Steeple Chase," "Irish Moss." Parfums L'Orle Inc. of Manhattan had "Buckskin" and "Touchwood" perfumes ("Just for your handkerchief, of course") at $5 an ounce. Another managed to combine the smell of "the finest cognac, cedarwood, Russian leather and the great outdoors.

"All this hallooing was touched off by a trim, glib Manhattanite, Alfred D. McKelvy, a former longshoreman, clerk, gold prospector (he planned $87 worth of gold in six months) and adman. McKelvy got his idea in 1939 while sharing the apartment of a lady friend (absent) with another man. The roommate rummaged through cosmetics he found, just for fun gave himself the works—including a bubble bath and a cologne rubdown. He enjoyed it so much that McKelvy thought: "Why wouldn't other men?"

"The idea was not new. Yardley of London, Inc. (now made in New Jersey), Roger & Gallet, and Guerlain, Inc. had, in a limited way, gone into the lotion-and-lavender field for men 30 years ago, had then been followed, timidly and on a small scale, by other talc and cosmetic makers. Altogether



Retail sales of cosmetics for the twelve months ended with September 1945 totaled $791,800,000. This compares with $779,600,000 for the twelve months ended with August 1945 and with $666,867,000 for the twelve months ended with September 1944.

Your Package is Always on Trial!

THE minute your package leaves your plant, it is on trial. It must afford perfect protection through all the hazards of shipping, handling, storage, selling . . . or when it comes before that stern critic, the consumer—judge, an unfavorable verdict for your products looms.

To obtain a favorable decision plus repeat sales, package in a light, strong, highly protective Anchorglass Container, effectively sealed with an attractive Anchor Cap, exactly suited to your product's characteristics.

Sparkling Anchorglass Containers are accurate in capacity and finish—are designed to withstand production and shipping hazards. Anchor Caps go on fast, seal and reseal easily, and provide dependable airtight and leakproof protection.

Tune in "Hobby Lobby" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

Packaging Forum

By Josephine von Miklos

Few subjects are easier to argue about, and more difficult to agree on than Taste. To begin with, nothing seems to insult people more than to tell them they have bad or no taste. A good many men and women would mind less being accused of stealing than of selecting things in bad taste. Our all-too gullible general public has accepted the dictum of arbiters—self-styled or developed with good reason, on certain color schemes, shapes and decorations and agrees that a thing is in good taste because an advertisement, a promotional campaign or the pronouncement of a feature writer has said so. Actually, the fewest people, and, that goes for the general public as well as a good many professionals who are engaged in the business of creating or selling taste, are completely conscious of the reasons for an item being in good—or bad—taste.

The cosmetic industry in its packaging activities, has stood for quite some time, in the center of these questions. A manufacturer of high repute for the quality of his products can sell the public practically anything and because the stuff has his name on it, it is assumed that the dress too must be good. But there is really no law that this is so. Several of the best known and most successful houses have produced packages that few people of discrimination in the matters of taste and style would find acceptable.

Still, it is so simple to define good taste in a cosmetic package. All it means is integrity in the relationship of content to container. There is no integrity in putting a very cheap perfume into a bottle that looks like handcut crystal. Integrity of package means appropriateness to use; and it also means a sensible ratio between the cost of content to cost of package. In addition to that, and to make these factors more specific, color, design and decoration should stay within the realm of the destination of a cosmetic item. There is nothing wrong—and nothing in bad taste—about using, for instance, all the known symbols of beauty, love, charm, as decor for a label or box. There is everything wrong with making a perfume bottle look like a lamp or the Statue of Liberty, or an airplane. If one designs a cosmetic line for the "sporty type," there would surely be nothing wrong with covering the boxes with leather, and using stirrups as symbols for decoration. There would be everything wrong with attaching a fake riding crop around the neck of the bottle. There is nothing wrong with making a modern shaving bowl in the shape of an old shaving bowl; but there is everything wrong and cockeyed and chi-chi about making a shaving bowl look like a gravy boat. The examples in this direction are legion. There are, most likely, much better ones than those mentioned. The story simply is that no one in the cosmetic industry, sales man, promotion man, advertising man or designer, should be allowed to go haywire just to be cute, just to be different, just to be startling. Ephereal promotional design stunts are a lot less sound than is the building of an honest design theme which helps create that atmosphere for the cosmetic item which will give it authority. No matter how chic and "out of this world" gold tassel may be for a week in a Fifth Avenue store window, unless the tassel really fits the package, it will remain only a stunt.

Cosmetic design, is, after all, a serious business and good taste it's one predominant ingredient. It has been established long ago that it is wiser and a sign of greater culture to under dress than to over dress. There will be in the future less suspicion of the cosmetic business as a whole, if we stick to real integrity of design.

in 1939 they grossed only about $12,000,000 a year, small change compared to the half-billion-a-year business in women's cosmetics.

"What McKelvy wanted to tap was a new luxury market. Said he: 'I had the same problem that cigaret makers had selling to women.' At night, McKelvy began mixing powder in a tin pan with an eggbeater, soon had enough to take around to stores. To Manhattan buyers, he brought cheap full-page ads in obscure trade journals, promised them they would appear in the slick magazines. The stores bit, but slowly at first. He lost $5,000 the first year. Then came the war, and the boom in shipments of gift packages to G.I.'s overseas. By 1942, Alfred D. McKelvy Co. (trade name: Seaforth Toiletries for Men) grossed over $500,000, good enough so that Vick Chemical Co. paid McKelvy upwards of $500,000 in Vick stock for a controlling interest. Last year Seaforth grossed over $2,000,000. Last week McKelvy stepped out of his company as board chairman to launch a new venture: McKelvy Industries (women's cosmetics).

"Where he led, others have followed. The handful of men's toiletries companies has grown to over 100, with a gross business of $50,000,000 a year, an advertising budget of $10,000,000. It had reached a point where even Hollywood thought it worth satirizing (*see cut*). Moreover, returning G.I.'s are buying heavily scented colognes without a snigger. They have been well educated. Said one salesgirl: 'From all the stuff we've mailed to servicemen overseas, I'll bet that jungle smelled awful nice'."

The Vick Charts Again

"Time's" above-reported figures on the McKelvy operation drove us back to our October issue, in which we published two charts from Vick's annual report. These charts showed percentagewise what had happened to the Seaforth and the Matchabelli business since Vick took over.

If we accept the Time figure for Seaforth's last year's sales of over $2,000,000, then the block which represents "the last full year before acquisition by Vick" becomes about $200,000. If you decide to reverse the thing and take the Time figure of $500,000 for the volume when McKelvy sold, then last year's volume would have been over $6,000,000 which is obviously impossible.

This reexamination also shows up a couple of other interesting points. The first two years after Vick took over represented the big expansion in Seaforth business, while the last two years show a considerable slow down. In terms of percentages the Seaforth business only increased by 58 per cent in the last two years shown on the chart. As compared with this, the Matchabelli operation increased by 166 per cent during this same period. And it goes without saying, of course, that the Matchabelli operation was and is a considerably larger one before or after Vick in terms of dollar volume.

Labeling Hormone Creams

The Food & Drug Administration has written a letter outlining its position on the labeling of hormone creams. This is an attempt to set straight the confusion which we pointed out some time ago when the creams containing synthetically produced estrogens began to make their appearance. The letter reads in part as follows:

"The term 'natural estrogen' in our opinion means estrogenic material as it occurs in and is obtained from natural sources such as pregnant mares' urine, stallions' urine, human pregnancy urine, follicular fluids, etc., in contradistinction from estrogens synthetically produced, such as stilbestrol. Estradiol may be either a natural estrogen or it may be produced synthetically by hydrogenation of estrone. Its manner of production would determine whether or not it is a natural estrogen.

" 'Natural estrogen' is not recognized in any of the official compendia. There is no official standard for such an article. The proportions of estrone and estradiol is 'natural estrogen' doubtless vary with the source. It has been reported to us that the estrogenic material obtained from pregnant mares' urine ordinarily contains as much as 85-90% of estrone. That, of course, does not mean that an article containing 90% estrone is necessarily a 'natural estrogen'. Whether or not an estrogenic preparation is 'natural' depends upon its source, not upon the proportion of estrone contained in it.

"Labeling of an estrogenic preparation in a manner indicating that the active ingredient has been derived from a natural source such as pregnant mares' urine is regarded as a violation of the Federal Food, Drug, and Cosmetic Act if in fact the article has been prepared by a partial or complete reduction of the estrone in the original material, or if estradiol has been added to it to increase its potency or its solubility in oil, or for any other reason. Any evidence which demonstrates such manipulation, particularly inspectional evidence, will be sufficient to form the basis of legal action. There will be no disposition on the part of the Administration to limit its investigations in this field to chemical examinations to demonstrate the truth or falsity of labels of products of this kind with reference to their compositions."

Teen Age Survey

According to a survey made by Seventeen magazines, only 17 per cent of teen age girls use cake make-up, while 65 per cent use nail polish, 84 per cent use deodorant and 93 per cent use lipstick. Of course, 100 per cent reported using soap and tooth paste, by which Seventeen undoubtedly meant dentifrice.

Well we have held a little informal survey of our own and of twenty-four high school girls picked at random, exactly twenty-four packed a lipstick and a cake make-up as standard cosmetic equipment.

According to Seventeen, again, 44 per cent buy their cosmetics in department stores, 44 per cent in drug stores, and 1 per cent do not use cosmetics. Revlon is well in the lead as lipstick choice with 36 per cent using that brand. Jergens gets 35 per cent of the hand cream business, Revlon 56 per cent of the nail polish, Woodbury and Coty about 12 per cent each of the face powder, Pond's 25 per cent of the face cream, Factor 56 per cent of cake make-up, and Maybelline 65 per cent of the mascara business.

Foundations

More women than ever are aware that attractive face make-up depends on a good foundation according to the new Fawcett Women's Group Beauty Reader Forum. "The number of women using a make-up base has increased from 70% in 1944 to 80% in 1945, with a market rise, 7% to 19%, in the number of those for whom hand lotion also serves as a cosmetic base.

"Although more women are experimenting with different types of foundations this year than last, cake base is still in the lead, being preferred by 39%, and tinted cream is a close second with 34%. The majority of both cake and cream users are partial to rachel and peach tints, but tan, which is second choice among cake users is a poor fourth with those who prefer a cream foundation."

Packaging Show

The Packaging Exposition of 1946 will be held in the Public Auditorium, Atlantic City, N. J., April 2 to 5, inclusive, 1946, it is announced by the American Management Association, the sponsoring organization. This show will be the largest in the fifteen year history of the exposition, according to the association's announcement, with some 150 leading manufacturers of equipment, machinery, supplies and services essential to the field of packaging, packing and shipping, participating.

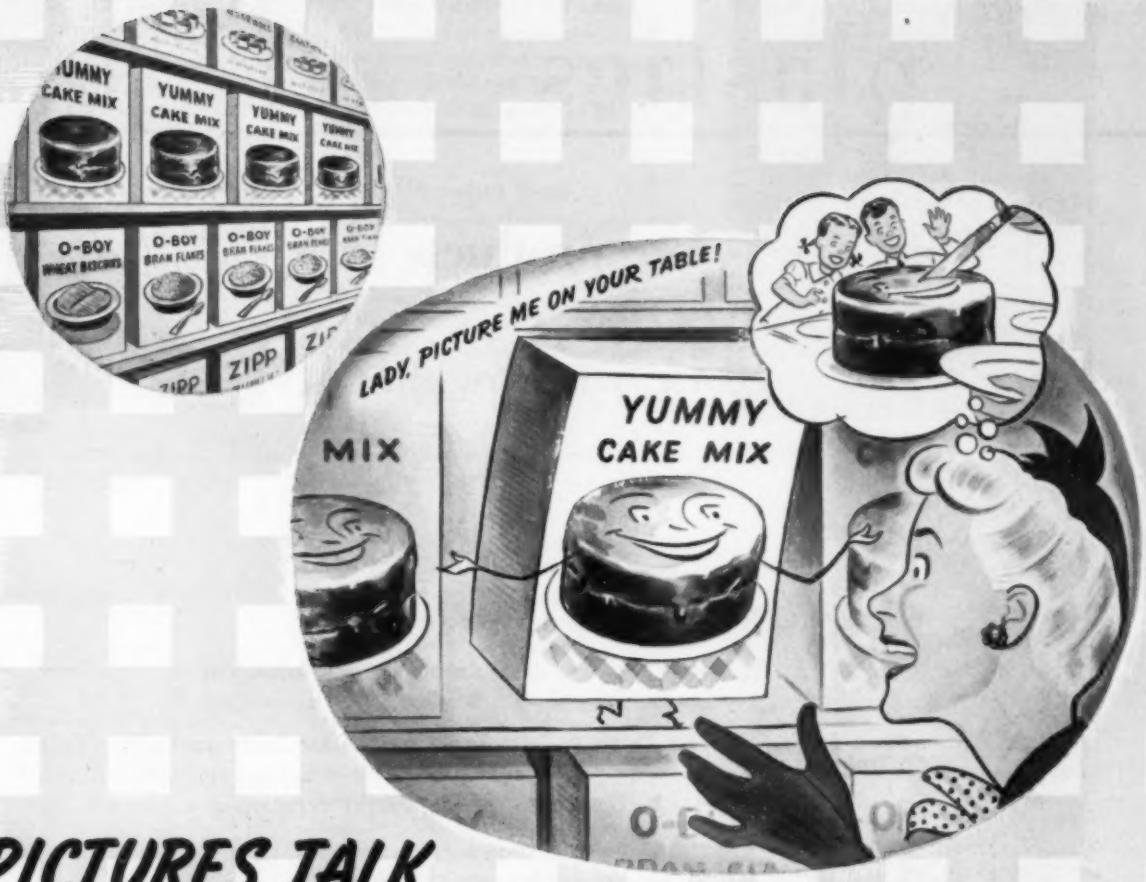
Concurrently with the exposition, the American Management Association will hold a conference on packaging, packing and shipping, with outstanding authorities in the field addressing the technical sessions. An attendance of between 6000 and 7000 executives of package-using industries in the United States, Canada and Latin America is anticipated.

The Cosmetic Trend

Buyers of cosmetic counters of department and drug stores are generally alive to the fact that they may have to put additional pep behind their selling, if they want to do more than their normal share of the cosmetic business from now on. There is the feeling, however, too that they should not be asked to do the job alone, but that the cosmetic industry should add its own weight.

Three avenues for future expansion are suggested. These in order of timeliness are: (1) Overcoming, by one means or another, the emotional letdown that follows the Christmas sales season and carries often right into January. (2) Bringing to the counters a number of new, or revive older products without a strictly seasonal appeal to act as a leveler of the demand curve. (3) A pepping up of the demand for utilities by raising their rate of consumption.

Much, certainly, can still be done to accelerate the rate of consumption. Buyers have learned with surprise that hundreds of thousands of even the older men in the army had not acquired the habit of shaving everyday before they joined. These will buy a great deal more shaving soap, than in the past, if they can be prevented from reverting to their old practices. No doubt, many other similar examples can be found. Good grooming habits, acquired during the war, in uniform or war industry, both among men and women, stand perpetuating with advantage to the sale of cosmetics.



PICTURES TALK

...on Coated Lithwite Cartons!

THEY COME UP WITH SHARPER REALISM—GIVE PACKAGES A MORE PERSUASIVE POWER THAT SELLS MORE GOODS

WIDE-AWAKE EDITORS know it. Smart advertisers know it. Canny merchandisers know it, too. *Pictures get more attention, get ideas over faster than type or abstract designs.* And pictures on *Coated* Lithwite cartons really pack a wallop!

At the point of display—the most vital link in your sales chain—they speak right up and sell. For smooth, velvety *Coated* Lithwite cartons are made of a revolutionary paperboard that reproduces pictures with brilliant and persuasive realism. And these crisper cartons have a quality look and feel that subtly influences shoppers.

When can you get *Coated* Lithwite cartons?

Sorry we can't give you a definite answer. Right now the Gardner-Richardson carton plants can't begin to meet immediate demands. But here's a suggestion: discuss the matter of future Coated Lithwite carton deliveries with a Gardner-Richardson sales representative, now.

Note These Outstanding Coated Lithwite Advantages

1. **Made by a revolutionary process.** *Coated* Lithwite is the brighter, whiter paperboard that is formed, made and coated in one high-speed operation. Proved and improved for six years.
2. **Means more eye-appealing cartons.** *Coated* Lithwite has a smooth, rub-resistant, chalk-free surface. Forms a better base for printing inks and plates—reproduces even the smallest type cleanly, crisply. Brings colors up brilliantly—gives halftones a sharp realism.
3. **Fewer jammers and leakers.** *Coated* Lithwite scores without flaking or shattering. Takes a positive, tight seal.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

plastics

that give your products . . .

show window beauty!

Take a look at plastics from your customers' point of view.

Sure, your product is finally sold on the basis of its own merit. But intelligent merchandisers recognize that bright packaging has a lot to do with sending sales curves upward.

That's why it will pay you to look to plastics produced by Dow for better packaging. Your customers will. They'll be quick to spot the "molded beauty" of Styron and the lightness and toughness of Ethocel Sheeting. These plastics are worthy companion pieces for the finest products.

Ethocel Sheeting

PRESENT AND POTENTIAL USES: Containers of all types, sizes and shapes for jewelry, cosmetics, and other products. Also used for displays, advertising novelties, greeting cards, envelopes, labels, decalcomanias, electrical insulating tape, ice cube trays, lighting fixture covers, lamp shades and similar products.

PROPERTIES AND ADVANTAGES: Combines toughness with flexibility; tensile strength 10,000 lbs. per sq. in.; elongation, 30%; folding endurance (1 kg; M.I.T.), 2,750 (.002"). Retains these characteristics and transparency over long periods despite handling. Resistant to alkalies and grease. Withstands dry heat to 220° F. continuous; to 275° F. intermittent. Resists cold. Easily fabricated by drawing, folding and scoring. Can be joined by adhesives, beaded, printed, crimped, stapled and sewed.

STYRON

PRESENT AND POTENTIAL USES: Cosmetic and pharmaceutical boxes and containers of all types; funnels; bottles; closures; food handling equipment. Also used for other products: jewelry; advertising items; refrigerator parts; pens; pencils; chemical apparatus; lenses; decorative objects, trim and many other uses.

PROPERTIES AND ADVANTAGES: Beautiful, clear, translucent or opaque; resistant to acids and alkalies; stable at low temperatures; broad color range; low specific gravity, providing more moldings per pound; low water absorption, good dimensional stability.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN
New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

DOW

PLASTICS

FOR BETTER PACKAGING:

STYRON • ETHOCEL SHEETING • SARAN FILM

Ice-Mint is a soothing, cooling preparation to help relieve the discomforts of tired, burning feet, offered by Foster-Milburn.

Farel Destin introduces a new melody in fragrance, Strange Music, attractively packaged, and available in two sizes

Speerl & Co. offers Curlaquer for keeping hair in place, and Curluster, a perfumed brilliantine type hairdress, together with atomizers suitable for each preparation.

Informative Labeling For Plastics

The Society of the Plastics Industry has prepared a booklet on "Informative Labeling" which we can recommend unqualifiedly as an adult and intelligent job.

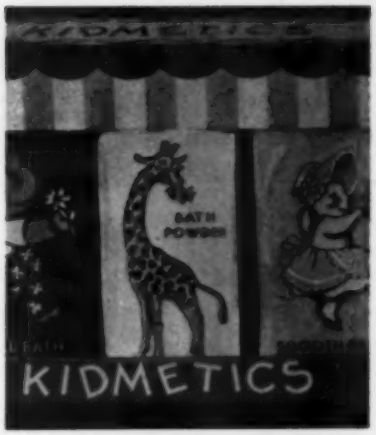
National Packaging Week

Plans for an international packaging exposition to be held in New York early in 1947 in connection with "National Packaging Week" were launched last month at the Seventh Annual Meeting of the Packaging Institute. According to an announcement by Walton D. Lynch, president of the institute, the exposition shows promise of being the first international merchandising exposition to be held since the war.

Cosmetics for All Ages

The cosmetic market for the very young seems to be taking on added momentum almost every day. Cradle cosmetics such as those sold for years by firms like Mennen and Johnson and others in plain packaging have suddenly become glamorized by the introduction of products such as the Dorothy Gray line for babies and the Orloff Baby's Breath toiletries. Further up the age group but leaving a wide gap in years were lines devoted to the so-called teen-agers. Pioneer among them of course, has been Rose Laird with her preparations for the adolescent complexion problems with a few glamor products such as lipstick and cologne in the line. Seventeen also marketed treatment products for the youthful skin. These two had little competition in the way of treatment preparations for this age group but manufacturers here and there have produced products catering to the glamor angle for this group such as Lentheric's Pink Party. This market has recently been flooded with perfumes, colognes, lipsticks, etc., directed to the teen-ager. Then suddenly manufacturers became aware of the gap between the cradle cosmetics and the teen-agers and lines have come along directed to children of all ages.

Helene Pessl who was among the early ones to take advantage of the little girl market with her Little Lady toiletries, has now created a line for the teen-age group called Melinda. This line is designed for the care of tender, youthful skins and consists of various creams and lotions for the disturbed skin, preparations for the normal skin and make-up, toilet water, shampoo, hand lotion and dusting powder. The Helene Pessl line now covers cosmetics

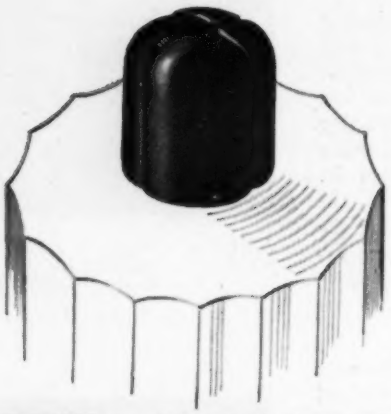


Kidmetics is the name of the line designed for the young girl and boy and featured by Irene Blake Cosmetics, Inc.

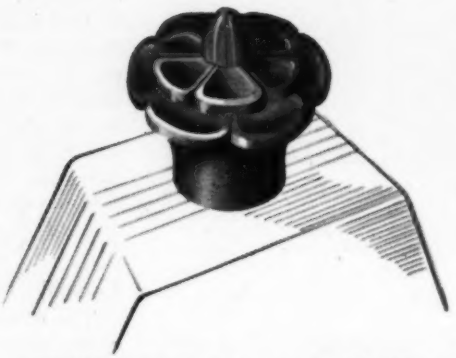
The House of Puzzy Good Habit Kits go a long way to help make good grooming habits fun for the very young set.

Helene Pessl's teen-age line Melinda, is specifically designed for the care of youthful skins, and charmingly packaged.

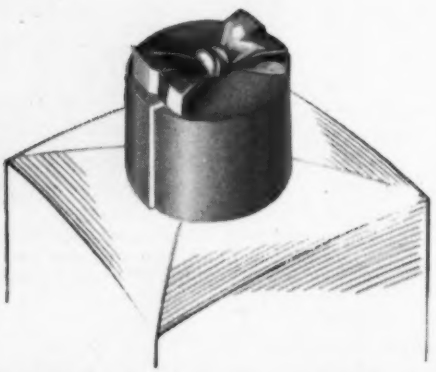
STYLE AND BEAUTY NOTES FOR YOUR PRIVATE MOLD CAPS



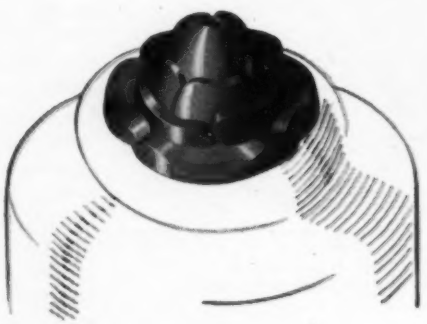
ACCENTUATE the characteristic features of your package with an appropriate Artmold Cap. It can help your package look taller, shorter . . . more glamorous.



DESIGNS can be distinctive and highly individualized, too. The right Artmold Cap design can give your package sales-building style and beauty.



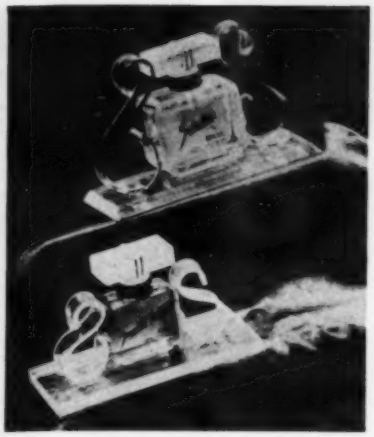
UNLIMITED possibilities in cameo designs are available on Artmold Caps. Let Armstrong show you design suggestions tailored to the personality of your package.



YOUR OWN exclusive sculptured design on an Artmold Cap lends permanent beauty and customer-building distinction to your "luxury trade" packages.

ARMSTRONG'S *Artmold* PLASTIC CAPS

YOU CAN ADD extra style and beauty to your packages, give them the eye-catching individuality they'll need to compete successfully in today's markets, with tastefully designed Armstrong's Artmold Caps. Get free design suggestions today, by sending a sample drawing of your package to Armstrong Cork Company, Glass and Closure Division, 3812 Prince Street, Lancaster, Pennsylvania.



Two new perfumes by Bergel of Hollywood called Seduction and Seventh Heaven, stand in a plastic holder of graceful design.

Chalelle Parfums offers Response, a sweet and spicy fragrance available in three sizes, and packaged in a triangular box.

Colonial Dames has a new Cream Make-up which goes on like magic and helps conceal minor flaws and leaves a velvety finish.

for all ages, from infancy with the "Baby Dear" line, the "Little Lady" line, the new Melinda teen-age line, and Helen Pessl's line of preparations for women.

Kidmetics is among the lines to tickle the taste of the young, both boy and girl. Gaily packaged in open-faced, balloon decorated, circus-striped tents, the products are boxed singly, and in double and triple groups. Each bottle has a circus animal screened on it in colors to identify the product it holds—for example—a swaggering lion-tamer decorates the Hair Trainer.

Another newcomer is the House of Puzzy with its Sizzy and Puzzy Good Habit Kits. The Sizzy kits are attractively packaged in cerise and green and hold a bright tooth brush, a tube of pleasant-tasting tooth paste, castile soap and a bottle of delicately scented toilet water, for the girl, and for the little men of tender ages there is the Puzzy Good Habits Kit containing a tooth brush, tooth paste, castile soap and castile shampoo. These kits retail at $1.25. Since it is always a problem for mothers to get children to want to develop good habits, this type of kit has a real place in the cosmetic picture, and offers a large potential market.

Bath Magic

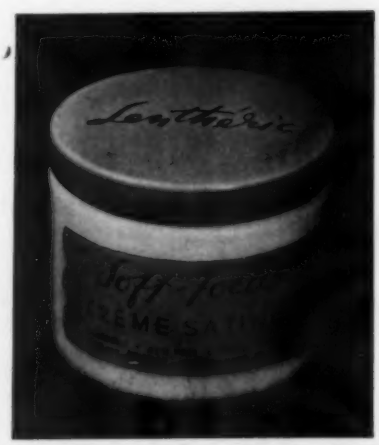
While gelatin capsules have been used for various products in the past, the usual procedure in order to get the product out of them has been to puncture them. Schratz is now using the gelatin capsule for water softening preparation called Tublets. Instead of having to puncture the capsule, however, it is simply necessary to drop one tublet into the bath while the hot water is running and the capsule will burst in a few seconds and disperse its fragrant contents throughout the bath. The gelatin capsules in four colors each denoting a different fragrance make an attractive presentation for the bath. A box of 16 Tublets retails at $1.25.

Modernistic Packaging

Chen Yu is introducing a new lipstick which has been created to harmonize with Cloud Silk make-up in make-up color and to match in packaging. The lipstick case is of gold metal with shiny, black top of plastic. The modernistic square-cut top fits over the metal case and rests on top of a red metal base. Also modernistic in design is the square black and red slide box which holds the lipstick. Cloud Silk lipstick in six shades will sell for $1.50.

Schratz uses gelatin capsules for its bath preparations called Tublets available in four fragrances and four colors.

Chen Yu Cloud Silk lipstick has been created to harmonize with Cloud Silk make-up in color and to match the packaging.



Creme Satinee, newest-comer to Lentherie's Soft-Focus group, combines the qualities of both soap and cream and gives the skin a satiny feeling

GOLF: MEDAL DAY AT BLACKHEATH IN 1874. (THE BLACKHEATH GOLF CLUB WAS ESTABLISHED IN 1608)

ARE YOUR *Packaging* METHODS OLD FASHIONED?

Benson can show you how to save money on packaging—and give you faster, more efficient service, with our scientific methods, streamlined production, and modern machinery.

Benson packaging service can save you labor worries . . . and save space in your plant now devoted to packaging, thus enabling you to increase production. We can ship from our plant to your outlets, saving storage space. With Benson packaging service, you can market products *without* machinery.

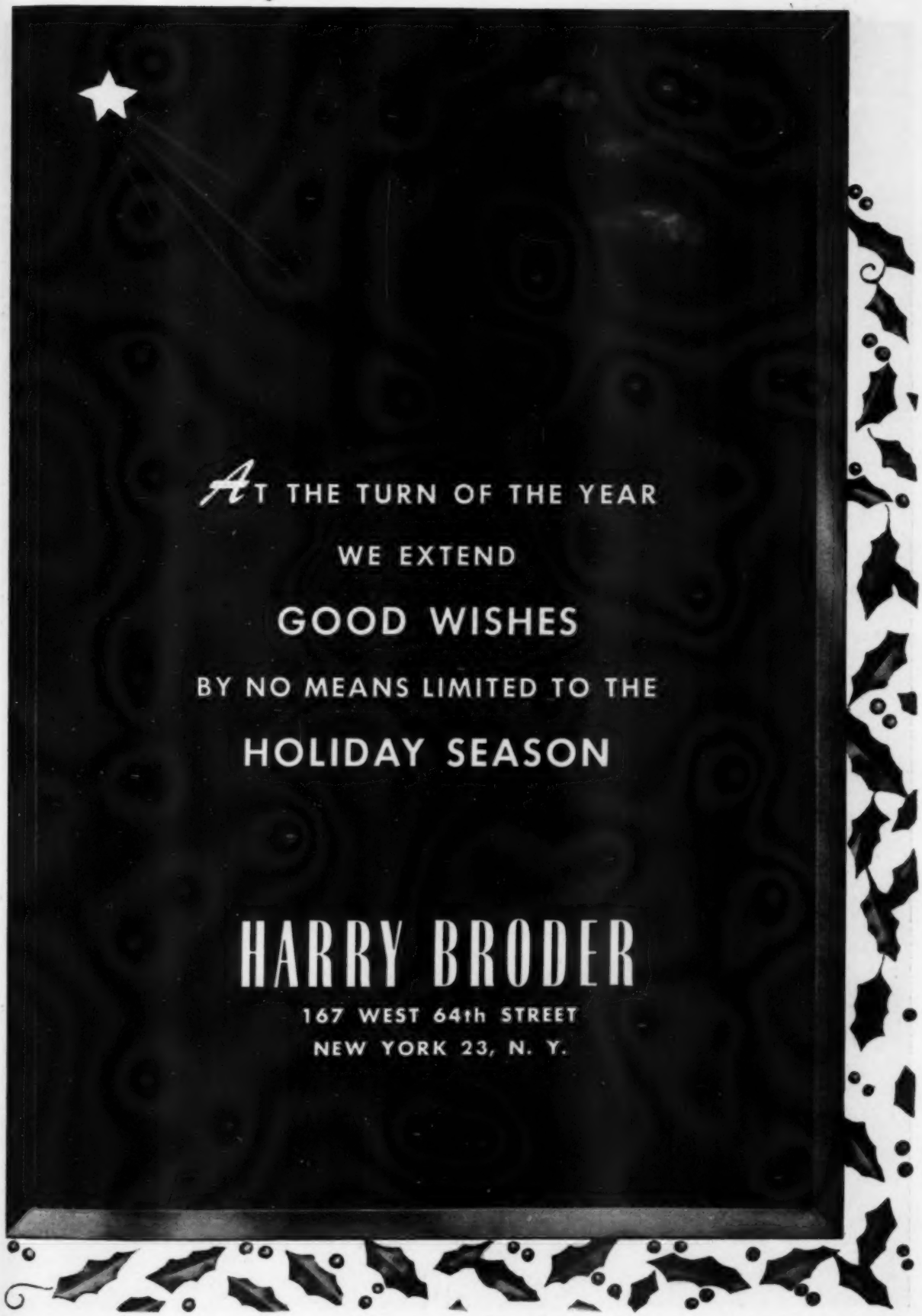
Now servicing an impressive list of drug, cosmetic, and food companies, both large and small, with a *complete* packaging service, including powder filling and weighing, bottling, labeling, cellophane wrapping, code marking, and sealing.

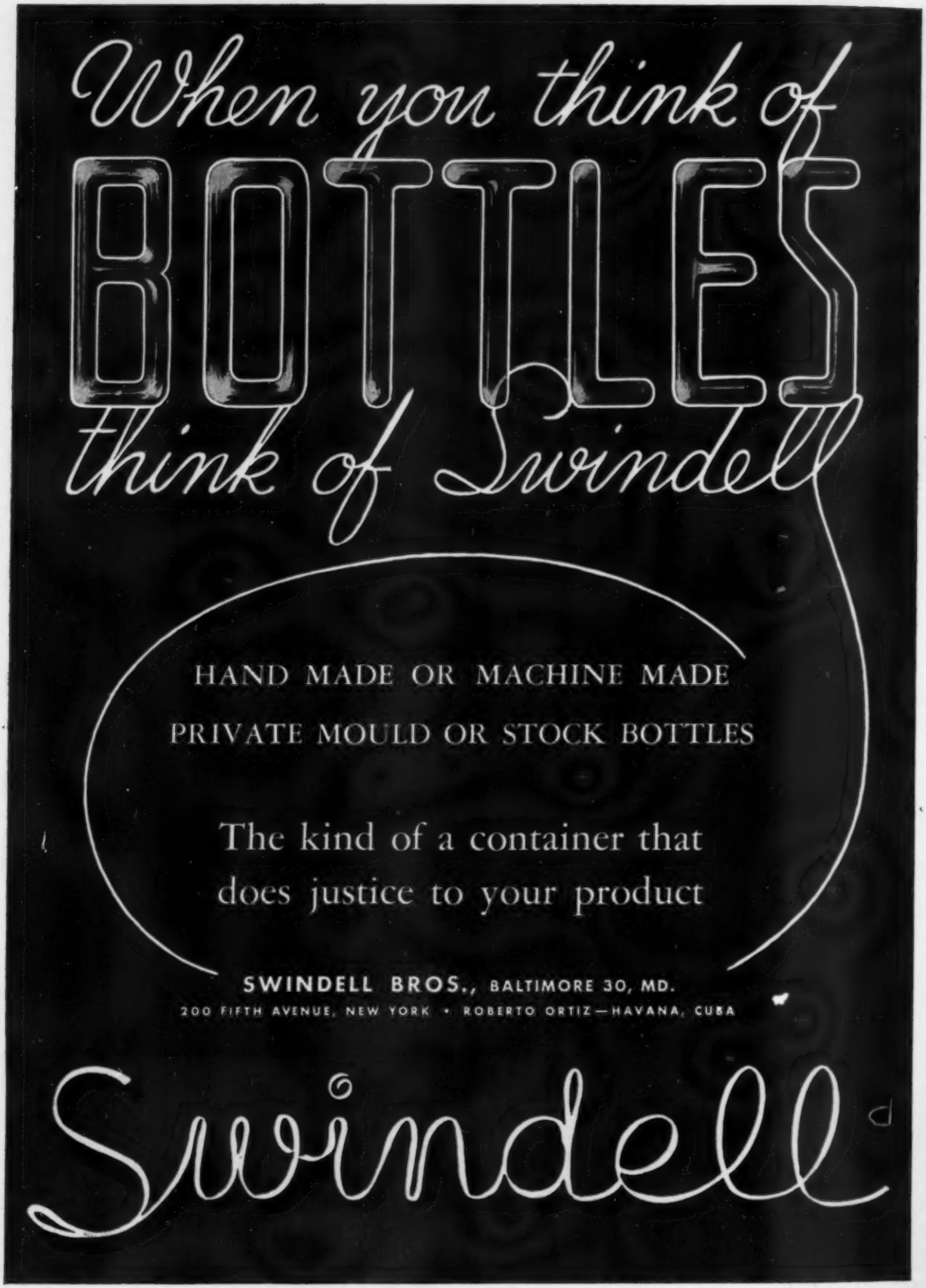
PRODUCTS PACKAGED UNDER YOUR PRIVATE LABEL.

YOUR INQUIRY IS INVITED. WRITE, WIRE, OR CALL

BENSON MANUFACTURING COMPANY

4731-35 North Broad Street, Philadelphia 41, Penna.
Phone: DAVenport 6061


AT THE TURN OF THE YEAR
WE EXTEND
GOOD WISHES
BY NO MEANS LIMITED TO THE
HOLIDAY SEASON
HARRY BRODER
167 WEST 64th STREET
NEW YORK 23, N. Y.


When you think of
BOTTLES
think of Swindell
HAND MADE OR MACHINE MADE
PRIVATE MOULD OR STOCK BOTTLES
The kind of a container that
does justice to your product
SWINDELL BROS., BALTIMORE 30, MD.
200 FIFTH AVENUE, NEW YORK • ROBERTO ORTIZ—HAVANA, CUBA
Swindell

"The bigger the family—the better the service"

THERE isn't room enough to tell you just *how* big Continental's family is—but you'll find it's plenty big enough to give you *complete* service.

Varied experience, technical skill, increased facilities and resources, designing and engineering "know-how" have been welded into one unit that can help you, from a particular problem to a perfect package.

Continental offers a complete line—metal containers, liquid-tight paper cups and containers, fibre cans and drums, steel pails and other heavy-duty containers.

We've been in there pitching for Uncle Sam. But keep your eye on Continental's trademark, too! The Triple-C stands for *one* company with *one* policy—to give you only the very best in quality and service.

Tune in: "REPORT TO THE NATION" *every week over coast-to-coast CBS Network*

CONTINENTAL CAN COMPANY, INC.

CONTINENTAL PAPER DIVISION

FIBRE DRUMS The Container Co., Van Wert, Ohio

LIQUID-TIGHT FOOD CONTAINERS — Boothby Fibre Can Co., Roxbury, Mass.

PAPER CUPS AND FOOD CONTAINERS — Mono Containers, Newark, N. J.

COMBINATION PAPER AND METAL CONTAINERS

Headquarters: 330 W. 42d St., New York 18, N. Y.

13 Plants — Sales offices in all principal cities

Continental Fibre Cans — These composite cans (with fibre bodies and metal ends) meet a definite packaging need. They bridge the gap between all-metal cans and paper containers, folded boxes or bags. They're made for easy conveyor and filler handling, in a wide range of shapes, sizes, and diameters, with a great variety of metal dispersing closures—"naturals" for safe shipping of drugs, cosmetics and chemicals.

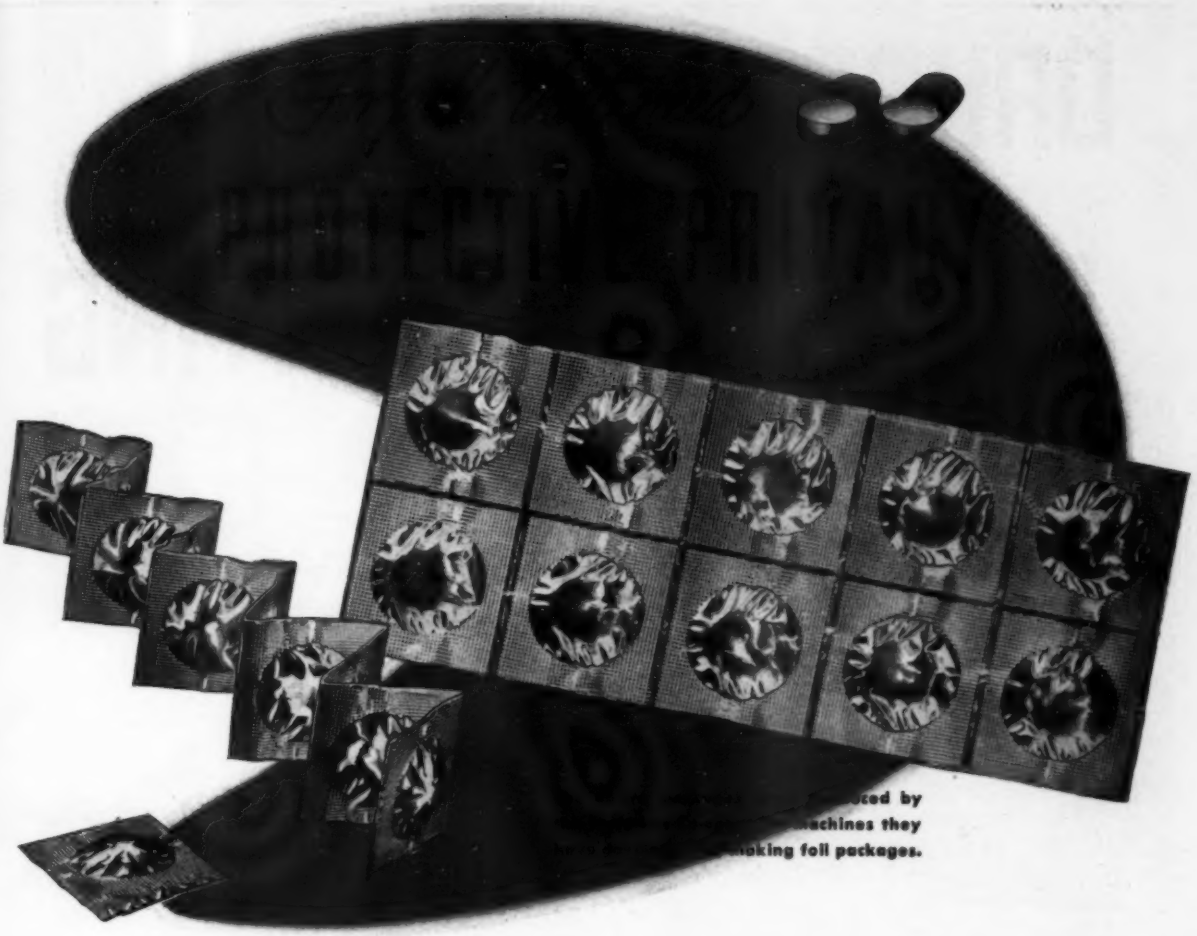
"Yes sir, that's Harris Tweed!"

On the islands of Lewis and Harris, in the bleak Outer Hebrides, the cottagers are busily spinning yarn . . . thick warm yarn made from the wool of the native sheep. The yarn is left in its natural shades, or colored by vegetable dyes cooked over peat fires. Then it is woven by hand into a durable cloth of rugged texture, which has the distinctive smell of heather when it is warm and moist. Yes, that's genuine Harris Tweed. This trademark, stamped right on every piece of the cloth by the British Government, is what millions of people look for when they want the best in tweeds.

Carr-Lowrey is the name to look for in the field of glass containers. For over half a century, our constant ideal has been "superior quality" . . . the making of the very best glass for the modern packager. Strict adherence to this principle has won for us the confidence and acceptance of a majority of the discriminating users of glass containers.

Factory and Main Office: BALTIMORE, MD.
New York Office: 500 FIFTH AVE.
Chicago Office: 1502 MERCHANDISE MART

CARR-LOWREY GLASS CO.



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...achines they
...oking foil packages.

Take vitamin tablets or capsules, for example. Locked in individual cells of Alcoa Aluminum Foil, heat-sealed, they are protected indefinitely against high humidity, air-borne mold spores, light, radiant heat, and other harmful things. Original potency and purity are fully preserved.

This superior method of packaging is done rapidly and economically on automatic machines. As shown above, pills, capsules, or tablets . . . powders, too . . . can be packed in blocks, tapes, or singly. Easy for the user to carry in a pocket or purse. Easy to open, too, and opening the package exposes only one pill at a time to the air.

It eliminates costlier containers. The foil tape can be accordion-folded compactly and packed in a simple, inexpensive box, or wrapper. If desired, the foil can be furnished with your trade name, directions, or other message printed attractively in color.

This is just one of many ways in which Alcoa Aluminum Foil can serve drug, pharmaceutical and toilet goods manufacturers . . . delivering your products safely, attractively, and economically. For information on how you can make the best use of aluminum foil, write ALUMINUM COMPANY OF AMERICA, 1913 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA

ALCOA ALUMINUM FOIL

57, 6

DRUGS

provide the toughest test for DRYING

Automatically controlled, ROSS Batch Dryer insures uniform drying in plant of Carroll, Dunham, Smith Pharmacal Co.

and leading manufacturers rely upon

ROSS BATCH or CONTINUOUS DRYERS

Prominent Users of Ross Dryers include

The Bayer Co. Inc., Burroughs Wellcome & Co., Chattanooga Medicine Co., Carroll, Dunham, Smith Pharmacal Co., National Drug Co., New York Quinine, G. D. Searle & Co., Sharp & Dohme, Inc., Stauffer Chemical Co., United Drug Co., and many others.

In no other industry are the requirements for proper drying so complex or so exacting. Depending upon the material, temperatures range from low to high, final moisture content is frequently as low as one-tenth of one percent. In every case, absolute uniformity of product is an essential demanding constant automatic control of both temperature and humidity. Other essentials are cleanliness and protection against contamination.

It is significant that Drug dryers constitute one of the most diversified and successful of the entire ROSS line—a tribute to their designs, construction and operating advantages.

THE ROSS LABORATORY

is fully equipped with all types of apparatus to definitely determine in advance the most efficient and economical method for drying your particular product. A descriptive brochure is available to you.

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J.O.ROSS ENGINEERING CORP.

DESIGNERS AND BUILDERS OF AIR PROCESSING SYSTEMS

ROSS CONTROL OF AIR FOR MODERN INDUSTRY SYSTEMS

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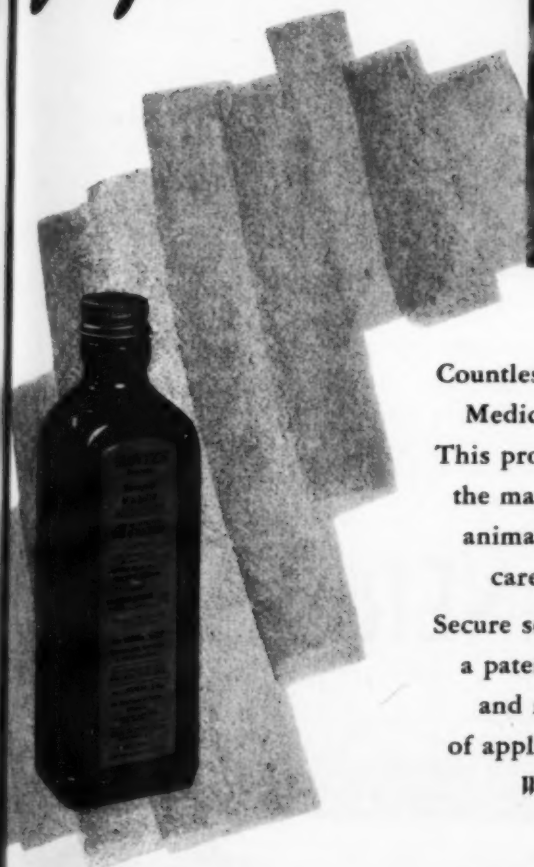
ROSS ENGINEERING OF CANADA, LIMITED — Dominion Square Building, MONTREAL, P. Q.

CARRIER—ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

POINTER...

for pet owners



Countless pet owners have for years depended on Glover's Mange Medicine as a reliable remedy in the treatment of Sarcoptic Mange. This product of H. Clay Glover Co., Inc., New York, N. Y., has been on the market since 1876. It is not only an effective preparation for use on animals but is widely used as a beneficial application in the scientific care of the human scalp and hair.

Secure sealing of this product is assured by use of Crown Screw Caps . . . a patented feature, the Deep Hook Thread makes them easy to apply and remove, yet gives double sealing pressure with the same amount of application force. Crown Cork & Seal Company, Baltimore 3, Md.

World's largest makers of metal closures.

CROWN CLOSURES

POP

goes the Package!

you can't get away from it!

It certainly would be fine if we could devise a package that would Pop-up from a counter or a dealer's shelf and give the customers the high sign. But . . . even we at WARNERCRAFT can't promise that. However, we're making just about everything else.

We don't make packages walk and talk but we do make them get attention . . . dramatize the product and sell the product.

Dealers like our packages . . . they add life, beauty and a touch of originality to prosaic counters. Customers like our packages . . . they intrigue the imagination and season the most matter of fact purchases with a bit of glamour. Manufacturers like our packages because they SELL their products.

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

THE WARNER BROTHERS COMPANY

Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.

SELENIUM

The "moon-metal" that keeps glass crystal clear

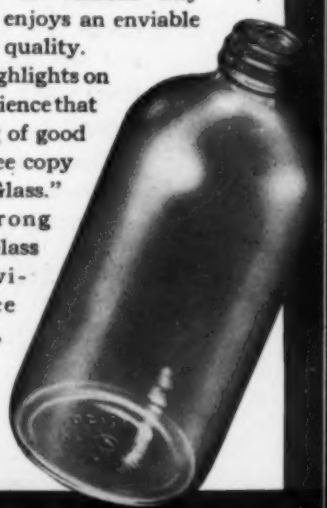
ALTHOUGH glass chemists still collect many headaches trying to produce absolutely colorless glass, they're having much better success since they learned how to use selenium.

This dull red "moon-metal," a by-product from the refining of copper and other metals, is a most efficient decolorizer for flint glass. It counteracts the coloring effect of iron, which is always present, even in the purest commercial ingredients, and which gives glass a blue-green or yellow tint.

To use selenium successfully, however, requires considerable skill and experience. For one thing, selenium and the cobalt oxide and other materials usually added with it must be used in fantastically small proportions—about one-half ounce of selenium and about 1/16 ounce cobalt oxide per ton of batch! Furthermore, if the atmosphere of the furnace is not right, or if the finished ware is not carefully controlled during annealing, the selenium will not produce its beneficial action and off-colored glass will result.

Armstrong's glass chemists, through years of research and experimentation, have learned to handle successfully not only selenium but also the other difficult and temperamental materials used in glassmaking. Their success is one of the reasons why Armstrong's Glass enjoys an enviable reputation for top quality.

For additional highlights on the skills and experience that go into the making of good glass, send for a free copy of "Men and Glass." Address Armstrong Cork Company, Glass and Closure Division. 3812 Prince Street, Lancaster, Pennsylvania.



ARMSTRONG'S GLASS

and

ARMSTRONG'S CLOSURES

Plaskon Closures ARE STOPPERS IN MORE WAYS THAN ONE!

THERE are three major features which distinguish Plaskon Molded Color for closures: utility, economy, and attractiveness.

Plaskon molding materials are plastics that are especially resistant to the chemical and physical action of a wide variety of products that must be packaged. Plaskon is completely impervious to the effects of alcohol, acetone, or other common organic solvents. It is not affected by oils, fats or greases. Because it is odorless, tasteless and inert, it has no effect upon any products with which it comes into contact.

Plaskon can be molded in large quantities at very economical prices. Distinctive designs and shapes can be secured to give new individuality to packages.

Plaskon is available in a wide range of beautiful, permanent colors that improve the appearance of any container, catch the eye and help make sales. We can give you helpful assistance in suggesting designs, qualified Plaskon molders, and technical advice so that you can efficiently adapt Plaskon Molded Color to your manufacturing and sales programs.

PLASKON DIVISION, LIBBEY•OWENS•FORD GLASS CO., 2110 Sylvan Ave., Toledo 6, Ohio
Canadian Agent: Canadian Industries, Ltd., Montreal, P. Q.

PLASKON
TRADE MARK REGISTERED
MOLDED COLOR

PAY UP HERE!

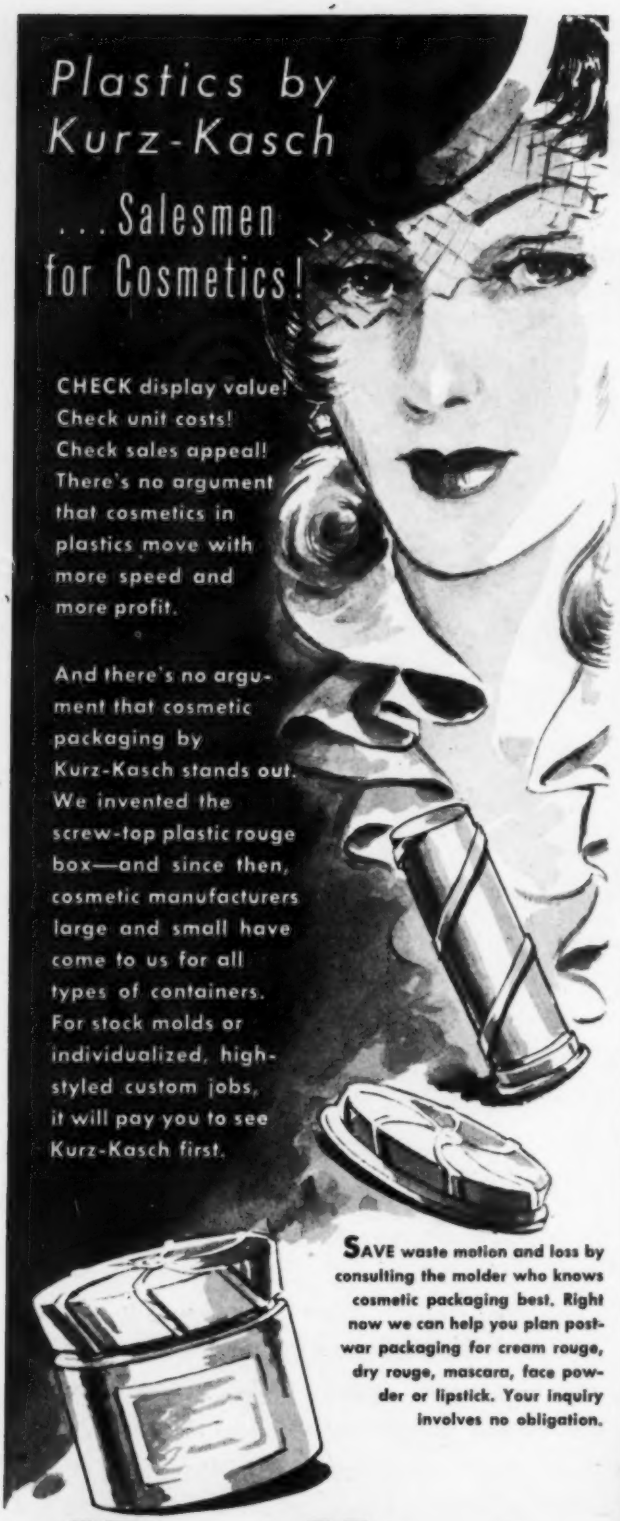
Poor Mr. Cave Man! In those days, perhaps, he paid tribute on excess loads on his back. He just forgot to unload his bundle after it had outlived its usefulness.

glass container & cap outlet co.
876 Broadway
New York 3, N. Y.

But are WE wiser? Many stock-rooms and EXPENSIVE storing spaces are losing money by tolerating an accumulation of useless containers and caps. *It's time for a profitable change!* Mr. Slowey, of the Glass Container & Cap Outlet Company, says: "Stop paying rent for for that dead collection! Turn the tables—get some useful cash for that useless trash! I'll pay CASH for your containers, glass or otherwise, ANY kind, ANY size, ANY quantity. Same goes for caps!"

Okay? turn that "Liability Pile" into an asset—

CONTACT US TODAY. ALgonquin 4-6066


Plastics by
Kurz-Kasch
. . . Salesmen
for Cosmetics!
CHECK display value! Check unit costs! Check sales appeal! There's no argument that cosmetics in plastics move with more speed and more profit.
And there's no argument that cosmetic packaging by Kurz-Kasch stands out. We invented the screw-top plastic rouge box—and since then, cosmetic manufacturers large and small have come to us for all types of containers. For stock molds or individualized, high-styled custom jobs, it will pay you to see Kurz-Kasch first.
SAVE waste motion and loss by consulting the molder who knows cosmetic packaging best. Right now we can help you plan post-war packaging for cream rouge, dry rouge, mascara, face powder or lipstick. Your inquiry involves no obligation.

Kurz-Kasch

For over 25 years Planners and Molders in Plastics

Kurz-Kasch, Inc., 1421 South Broadway, Dayton 1, Ohio
Branch Sales Offices: New York • Chicago • Detroit • Indianapolis
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Show Off Your Product in LUSTEROID

Why hide your product in packages folks can't see through?

Merchandising today calls for packaging that displays as well as protects and there is no better medium for visibility than crystal-clear LUSTEROID vials and tubes.

These modern plastic containers are feather-light, yet strong, rigid and unbreakable. They come in all colors of the rainbow—clear or opaque. There are no labels to affix because Lusteroid is printable. No special packing or partitioning required. You save money in packing and shipping so that Lusteroid packaging actually pays for itself.

Standard sizes from ¼" to 1¼" in diameter and lengths up to 6". Cork, clip-on or screw-cap closures.

Write for full details.

LUSTEROID CONTAINER CO., INC.
Formerly Lusteroid Division of Silcocks-Miller Company
Office and Factory
10 W. PARKER AVENUE, MAPLEWOOD, N. J.
MAILING ADDRESS: SOUTH ORANGE, N. J.

How a Piece of STEEL and a Little TIN Save You VALUABLE SPACE!

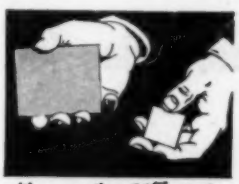
● On trucks and trains . . . in warehouses . . . on busy retail shelves . . . space costs money. But you can cut down those space costs by packaging your drugstore items in compact steel-and-tin cans.

Yes, steel-and-tin cans . . . which are more than 98% steel, less than 2% tin . . . are real space-savers because they can be safely shipped in low-cost, non-compartmented cartons, efficiently stacked in minimum storage space, and effectively used in any kind of point-of-sale display. And for high-speed packaging operations —free from danger of jamming "on the line"—you can't beat durable metal containers.

What's more, shatterproof cans please consumers because cans protect contents from bathroom moisture and impurities in the air . . . are safe to handle with wet, slippery hands . . . stay neat and clean. So, for perfect packaging protection and all-round space economy, package your drugstore items in trouble-free steel-and-tin cans.

Real Packaging "Know How" Calls for Drugstore Items in Cans

1. Cans save space on busy retail and bathroom shelves.
2. Cans don't break, split or tear.
3. Protect contents from moisture and impurities in the air.
4. Cans are economical to store and ship.
5. Labels can be permanently lithographed on cans.



It's more than 98% steel, less than 2% tin

Promoting Cans from Coast to Coast

Full-page, full-color advertisements are bringing the story of the advantages of buying merchandise packed in cans right into the homes of America's consumers. More than 32,000,000 of these informational advertisements will appear in the nation's favorite magazines and the magazine sections of Sunday newspapers this month.

CAN MANUFACTURERS INSTITUTE, INC., NEW YORK

NO OTHER CONTAINER PROTECTS LIKE THE CAN

These Wide-Mouth Packers, Bleach Bottles and Imperial Oblongs are three of the many hundreds of popular styles of Duraglas Containers.

Face-lifting for Old Products, Fancy Dress for New Ones in standardized, stylized Duraglas Containers

LOOKING for a container to give your present products different and improved appearance to help their sales?

Looking for a trim, swanky container for a new product that has to fight its way to the front in tomorrow's competition?

Then, look first among the many stylized *and* standardized Duraglas Containers for pharmaceuticals, cosmetics and household preparations.

You have scores of models from which to choose one that fits your filling line, blends with your label to form a handsome package, and sturdily safeguards its contents. Because they are standard styles you benefit from the economies of our volume production.

OWENS-ILLINOIS GLASS COMPANY
TOLEDO 1, OHIO
Branches in All Principal Cities

Duraglas
TRADE MARK REG. U.S. PAT. OFF.
CONTAINERS
PROTECTORS OF QUALITY

THE PACKAGE OF THE **FUTURE**

THE PALLETIZED LOAD
A WAR-BORN DEVELOPMENT

In Postwar planning many large shippers will be turning to the Palletized Load, because of the experience gained in this war.

Designing shipping containers to fit a freight car and NOT to hold a given amount of goods was a critical problem which was solved militarily.

There is NO reason why industries cannot adopt this procedure when the contents "Fit the Container" — which Fits the Pallet — which Fits the Boxcar.

Prior to the Palletized method, it took 14 men a half a day to break material out of stowage and load a car, handling each container separately. Now one person on a fork truck can load the same car in less than 2 hours.

For large users — booklet on the Palletized Load, illustrated with official photographs.

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PAPER

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Folding Cartons • Box Boards • Fibre and Corrugated Shipping Containers

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Richford's "NEW YORKER" Cap

Available in highly polished Brass or Brushed Bronze Finish to improve the appearance of your lines—Sizes 18 m/m to 24 m/m.

May we also now supply our "Mushroom", "Tulip", "T. Shape", "Biltmore" and "Princess" caps for your "Toiletries"?

All our caps are made with the Special Patented Feature to avoid corrosion. All contain an inner plastic liner guaranteed to be leak proof.

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When the liners "snug down" smoothly, without buckling, the pressure of the closure is distributed evenly all round the glass rim.

Bernardin Closures have an ingenious "floated liner" to help make a tight seal certain, and insure delivery of your product in top condition.

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This important *extra* refinement springs from Bernardin's extensive facilities and the experience of three generations devoted to supplying closures to meet most every need.

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Since 1881 America's First Manufacturers of Metal Closures

Two Proven Winners!

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2. GRIPS STRONGER!
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Here's the amazing, improved gummed sealing tape that means better, more economical packing and shipping for you. VIPACO "6-Action" gummed tape is stronger, yet less bulky . . . a specially prepared glue gives even overall coverage and won't side-slip . . . unusual flexibility allows for gripping around corners . . . it sticks instantly without added pressure.

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What do you know about the Stericap Seal?

Physicians like them on serums and parenteral solutions because they're so convenient to use, guard against contamination, and maintain specific strengths. The last cc. is as sterile as the first.

Made of aluminum, the Stericap comes as a three-part unit which goes over the rubber stopper and locks on the container in a single, speedy, automatic operation, hermetically sealing the contents.

Maybe there's something in your line of products that could be better protected with the Stericap Seal. It can be readily adapted to many different sealing needs. Let us send you samples and further details so you can see for yourself where they can be used to advantage.

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ALSECO STERICAPS

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SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

A vital threesome in the making of an effective germicide!

fine chemicals of measured purity

your technical skill in manufacturing

rigid laboratory control in your plant

When Sister gets a scratch on her hand, or Johnny a cut on his knee – to the rescue comes Iodine!

For numberless years, Iodine has enjoyed a wide reputation as an efficient germicide.

And manufacturers, using care and skill in the making, see to it that Iodine continues to be *good*.

They achieve their results, not by a single factor, but by employing all three of these:

– They choose, first of all, Iodine and Iodides of uniform and dependable quality.

– They scientifically compound all the ingredients into a quality-finished product.

– They maintain rigid laboratory control over all raw materials, and over the product throughout its manufacture.

This "threesome" is, indeed, all-important.

And the first of them – the selection of the basic fine chemicals – can have much to do with trouble-free manufacture, and with the success of the finished product.

That's why it's good sense to choose fine chemicals with purity to the decimal – Baker Iodine (Resublimed), Baker's Potassium Iodide, U.S.P., or Baker's Sodium Iodide, U.S.P.

Measured purity is the foundation upon which Baker has built its service for you.

For many years, leading pharmaceutical and drug companies have known, and bought, Baker's fine chemicals (purity by the ton).

No matter what product you manufacture – if it requires one or more fine chemicals, specify Baker and you'll specify quality *at the beginning*.

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J.; *Branch Offices:* New York, Philadelphia and Chicago

Baker's

FINE CHEMICALS

NEWS...

Fairhurst Rejoins Tombarel

William S. (Bill) Fairhurst has returned from overseas and is back on his job with Tombarel Products Corp. Bill,

WILLIAM S. FAIRHURST

who spent nearly four years in the army, had several opportunities while abroad to visit Grasse, France.

McInnes to Head Salesmen

The nominating committee of the Salesmen's Association of the American Chemical Industry has proposed the following officers for 1946: president, James J. McInnes, Jr.; vice-president, James E. Ferris; treasurer, J. Robert Fisher; secretary, William C. Harmon; executive committee members for 1946-48, Paul W. Hiller and Robert B. Magnus.

Danilek Appointed by Affiliated

Joseph A. Danilek has been appointed general sales manager of Affiliated Products, Inc., cosmetic division of American Home Products. Mr. Danilek was at one time comptroller of Helena Rubinstein, Inc. and in 1938 went to Elizabeth Arden Sales Co. in a similar capacity and was subsequently made general manager.

In 1942 he joined Lehn & Fink Products Corp. as assistant to the president of Dorothy Gray, and was later made manager of Tussy. From May 1942 to October 1945 he served as a member of the advisory committee of the W.P.B. for the cosmetic industry. He has also been a member of the board of directors of the Toilet Goods Association.

McIntyre to Lecture at Temple

Joseph D. McIntyre has been appointed to an assistant professorship in bioassay at the Temple University School of Pharmacy, it has been announced by Dean H. Evert Kendig.

Mr. McIntyre received his B.S. and M.S. degrees in pharmacy at Temple University. He is president of Dr. D. Jayne & Son, Inc.; president of Ladox Laboratories, Inc.; chairman of the Scientific Section of the Proprietary Association; and vice-president of the local section of the American Pharmaceutical Association.

Potter Advanced by Warner

James S. Potter has been appointed assistant manager of the foreign division of William R. Warner & Co., Inc., it has been announced by D. A. Walker, vice-president in charge of the foreign division.

JAMES S. POTTER

Mr. Potter joined the organization in 1928 as manager of the company's branch in Cuba, and subsequently travelled in many countries, establishing branches in Australia, South Africa, China and elsewhere.

Danco Branch in Brussels

Gerard J. Danco Inc., New York, has opened its branch office in Brussels, Belgium, under the management of Hector Magerman. Miss M. Van den Bergh, assistant treasurer, has been appointed office manager and Mr. Carpona has joined the company as traffic manager. He has been associated with shipping and international forwarding firms.

Landes Joins Prentiss

Sgt. Maj. Karl H. Landes, discharged from the paratroops on points in July of this year, joined R. J. Prentiss & Co., Inc. November 1. He will handle aromatic drugs and spices as manager of that department and will make his headquarters at the company's New York office.

Mr. Landes holds a degree of Doctor of Botanical and Pharmaceutical Chemistry from Leipzig University. Before

KARL H. LANDES

entering the university he received practical training in the gathering of drugs and spices from the fields of Hungary and shipping them to various parts of the world.

Commissioned as a first lieutenant in the Chemical Warfare Service, he resigned his commission to join the parachutists. A member of the 503rd parachute regiment, the first formed in the United States, Mr. Landes saw action in several major campaigns in Africa, Asia, the Pacific, and the Philippines. He holds the purple heart with two clusters, bronze and silver stars, seven commendations and has been recommended for the Legion of Merit.

Copley Named to Norwich Board

Duncan M. Copley, chief chemist of the Norwich Pharmacal Co. has been elected a member of the board of directors of the company. He has been with Norwich for twenty-six years and is a member of the American Chemical Society and the American Pharmaceutical Association. He is a member of the American Drug Manufacturers Association Combined Contact Committee, and has been active in the work of the U. S. Pharmacopoeia and the National Formulary.

Otis A. Thompson, president of the National Bank & Trust Co. of Norwich, a director since 1916, has been elected a member of the executive committee.

Preparing for the adventure of creating a new scent or a new flavor, the blender looks first to his basic materials. They must be varied enough to give free rein to his imagination . . . they must be uniform and of high quality to assure the excellence of his finished product.

Dow's Synthetic Aromatic program is organized with both these essentials in mind. Carefully controlled manufacturing techniques assure dependable, uniform quality. And a background of intensive research provides a steady flow of new Dow Aromatics . . . a never-ending invitation to new ideas.

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CHEMICALS

INDISPENSABLE TO INDUS

Lynch Again Heads Packaging Inst.

Walton D. Lynch, vice-president of the National Folding Box Co., New Haven, was re-elected president of the Packaging Institute at the seventh annual meeting of the Institute. Mr. Lynch joined the National Folding Box

WALTON D. LYNCH

Co. in 1919 as a clerk and rose through various positions in sales and manufacture to that of vice-president in charge of sales and advertising to which post he was appointed in 1936.

He has served two terms as president of the Folding Paper Box Manufacturers Association of New York, and as director, chairman of the executive committee and president of the Folding Paper Box Association of America.

W. O. Brewer, manager, pharmaceutical Sales, Calco Chemical Division, American Cyanamid Co., and George A. Mohlman, president, Packaging Machinery Co., were elected vice-presidents.

New directors for the production division of the Institute are J. H. Maget, Merck & Co., and A. F. Stevenson, the Borden Co. New directors from the machinery division are Howard R. Stewart, Economic Machinery Co., and George W. von Hofe, New Jersey Machine Corp. The Institute's supplies division will be represented on the new board by T. A. Torrence, Aluminum Co. of America, and Henry W. Stevens, Benjamin C. Betner Co.

Mason T. Rogers, Dewey & Almy Chemical Co., and Lloyd I. Volckening, the Ivers-Lee Co., will head the supplies and production divisions respectively. Frank B. Fairbanks, Horix Manufacturing Co. was re-elected to head the machinery manufacturers division.

Stievater Joins McKesson

Leonard Stievater, Jr. has been appointed technical director of the Industrial Chemicals division of McKesson & Robbins, Inc. He was formerly technical advisor to the general sales division of Merck & Co., and assistant to the director of research of the J. T. Baker Chemical Co.

Olin Joins Lynette Perfumes

Oscar C. Olin has been made director of sales, advertising and promotion of Lynette Perfumes, Inc., New York, it has been announced by F. J. Stanton, president of the company. Mr. Olin was formerly sales manager of the retail division of Revlon Products Corp.

Ohme Advanced by Warner

William G. Ohme has been promoted to the position of manager of the St. Louis office of William R. Warner & Co., Inc. Mr. Ohme was recently released from the Army where he served as a Major on the General Staff of the

WILLIAM G. OHME

1st Infantry Division in the European Theater of Operations. He was assistant manager of the general accounting department and had been with Warner for over five years before he entered the army. He entered active service as a 2nd lieutenant in April1941.

Fanning Recovering

Frank G. Fanning, sales manager and a partner in N. I. Malmstrom & Co., New York, is recovering satisfactorily from an operation which was performed at the Nassau Hospital, Mineola, N. Y., November 27.

Members of the N.A.R.D. executive committee and the A.Ph.A. council during their annual joint conference in Washington, November 9. Standing left to right: H. H. Schaefer, Brooklyn; John B. Tripeny, Casper, Wyo.; William McConaghy, Pittsburgh; Theodore Christianson, Chicago; Herman S. Waller, Chicago; Charles E. Wilson, Corinth, Miss.; Sylvester H. Dretzka, Milwaukee; James W. Lyons, Detroit; Robert L. Swain, New York; Henry H. Gregg, Minneapolis; Roy B. Cook, Charleston, W. Va.; George H. Frates, Washington; Charles H. Evans, Warrenton, Ga.; seated, Mrs. Rabbitt and Mrs. Millbrook, secretaries to Dr. Fischelis, and Miss Billings, secretary to Dr. Dargavel; Robert P. Fischelis, Washington; John W. Dragavel, Chicago; George D. Beal, Pittsburgh; Frank W. Moudry, St. Paul; and George A. Moulton, Peterborough, N. H. Others attending were J. Otto Kohl, Cincinnati; P. J. Suttlemeyer, Hickory, N. C.; Charles Gilson, Centreville, R. I.; Ernest Little, Newark, N. J.; P. H. Costello, Chicago; and E. R. Serles, Chicago.

Sons of Weeks Joins Company

Carl Weeks, president of the Armand Co., Des Moines, has announced the appointment to executive positions in his company of two sons recently discharged from the armed forces.

EVERT WEEKS

Lt. Evert D. Weeks has again become vice-president and general manager, after three years with the U. S. Naval Reserve, eighteen months of which was spent in the South Pacific with a Naval Aviation Unit, and the balance with the Bureau of Aeronautics, Washington.

Capt. Lafe Weeks, winner of the D.F.C., and the air medal with four oak leaf clusters for thirty-five missions over

LAFE WEEKS

Japan, has been appointed treasurer. He spent the last four years with the Army Air Forces, first as instructor on heavy bombers, then nine months overseas with a B-29 group. Capt. Weeks was not with the Armand Co. before his war service.

Spencer Rejoins Houbigant

After thirty-two months as a lieutenant in the Naval Reserve, Robert G. Spencer has returned to Houbigant Sales Corp. as advertising manager and publicity director.

Mr. Spencer was formerly publicity director for Houbigant for more than six years.

Thomas Sparks

Thomas Sparks, sales representative for S. B. Penick & Co., producers and manufacturers of botanical drugs and medicinal chemicals, died November 9 at his home in Wynnewood, Pa.

He joined Penick in 1934 as sales representative for Philadelphia, Baltimore and Washington. Prior to that he had been for twenty years with McIlvaine Brothers of Philadelphia.

Sandoz Advances Rothenberger

Sandoz Chemical Works, Inc., New York, has announced the election of E. M. Rothenberger to the office of executive vice-president and to the board of directors. Dr. Rothenberger will continue as general manager of the pharmaceutical division of the company.

Pfeffer Joins Schnefel Bros.

George Pfeffer has joined Schnefel Brothers Corp. He was recently associated with Helene Curtis and prior to that was for several years on the sales staff of the American Hairdresser.

Haine Joins McK. & R.

Ray C. Haines has joined the sales staff of the export division of McKesson & Robbins, Inc. He was formerly sales representative for Sharp & Dohme in Cuba, Argentina and Brazil. In his new post he will be responsible for developing sales of McKesson & Robbins' own manufactured products in the Latin-American market.

Richheimer Rejoins Warich Drug

Horst O. Richheimer, son of Walter Richheimer, president of Warich Drug Co., Inc., wholesale druggists, Richmond Hill, N. Y., has rejoined the company as head of the pharmaceutical and chemical department. Mr. Horst Richheimer, who has been on leave of absence from the company, served as pharmacist with the 237th General Hospital in France.

Sauers Joins Pepsodent

L. A. Sauers has been named western regional sales manager of the Pepsodent Division of Lever Brothers Co., with headquarters in Chicago.

Before joining the Pepsodent Division, Mr. Sauers was connected with Lever Brothers Co. for seventeen years.

Walter Eggenberger has been made supervisor of the Dallas division, succeeding Mr. McKee.

Heyden Appoints Malin

Heyden Chemical Corp. has announced the appointment of N. P. Malin as manager of the far eastern sales department. Mr. Malin was formerly export manager of Marshall Dill in

N. P. MALIN

San Francisco. He has traveled extensively in China, Japan, and Philippines and the East Indies.

He is making his headquarters at the company's office in New York.

Noh Joins Winthrop

Lt. Col. Joseph G. Noh has been appointed vice-president in charge of

JOSEPH G. NOH

sales and promotion of Winthrop Chemical Co., Inc. Since 1942 he has served as director of purchases, Medical Department, U. S. Army, directly administering the procurement of all medical supplies purchased by the Medical Department for the U. S. Army, International Aid, American Red Cross and other agencies served by the War Department.

From 1929 until he entered the Army, Colonel Noh was vice-president of McKesson & Robbins, Inc. in charge of the wholesale divisions in St. Louis and Wichita, Kan. From 1927 to 1929, he was executive director of the Pennsylvania Pharmaceutical Association.

Enlightenment by Harrell

ODOR APPEAL THAT WINS AND HOLDS THE PATRONAGE OF

Discriminating

LEADERS OF FASHION

. . . that is the goal of Albert Verley & Company's complete service

TURN THE PAGE

in all the formulas of leadership

Odor Appeal

is the base!

—let Albert Verley & Company help you build soundly, with specialized aromatic materials and creative counsel

★ When the fashion leader adopts your product and makes it her own, it is the odor that identifies it with her personality—and it is the odor that hosts of other women, her imitators in matters of fashion, seek to emulate.

This is true through all the price ranges of perfumery and cosmetics. At any level—up to the great odors of almost priceless distinction—there is no substitute for sound planning, quality materials, and creative originality in the field of aromatics.

That is why the house of Albert Verley & Company has labored to build a complete service—including materials in any desired stage of fabrication up to the finished composition, and counsel to aid in the constant search for new ideas and effects.

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Synthetic Aromatic Products & Organic Isolates • Synthetic Flower Oils & Aromatic Bases • Bouquets & Finished Compo

Harber Joins Bjorksten Labs.

William I. Harber has joined the staff of Bjorksten Laboratories, Chicago, as senior organic chemist.

Dr. Harber received his doctor's degree from Iowa State College in 1940.

WILLIAM I. HARBER

His doctor's thesis was in the field of nitrogenous fatty derivatives, and led to an engagement as research chemist with Swift & Co. Later he joined the staff of Witco Chemical Co. where he was associated with developments in synthetic polymers.

Luckman—Lever Exec. V.P.

Charles Luckman has been appointed executive vice-president of Lever Brothers Co. This is a newly created office which Mr. Luckman will assume January 1 when he will move his home from Chicago to Boston.

Born in Kansas City, Mo., in 1909, Mr. Luckman was educated in the public schools of that city and then moved to Chicago. In 1927 he enrolled for a course in architecture at the University of Illinois from which he was graduated in 1931.

During the depression Mr. Luckman took what he thought was a temporary job in the advertising department of Colgate-Palmolive-Peet Co. Later he was transferred to the sales department, finally in 1934 becoming divisional manager in charge of soap sales in six states with headquarters in Cincinnati.

In 1935 he joined the Pepsodent Co. as sales manager. The following year he became vice-president in charge of sales, and in 1937 vice-president in charge of sales and advertising. The next year he was named vice-president and general manager, then executive vice-president and in 1943, president. In July 1944 through purchase the Pepsodent Co. became a division of Lever Brothers Co.

LaPrelle Joins Kolmar Labs.

Kolmar Laboratories has announced that Tom LaPrelle has joined its eastern sales staff. The company has offices in the Empire State Building, New York, and plants at Port Jervis and Ellenville, N. Y.; Milwaukee, and Hollywood.

John Powell Consolidates Offices

John Powell & Co., consolidated their offices at 1 Park Avenue, New York, December 1. Since the first of the year some of the offices have remained at 114 East 32 St., while the accounting and executive offices have been at 1 Park Ave.

The laboratory remains at the East 32nd Street address and will be enlarged to occupy the space vacated by the offices.

Dr. Waksman Visits Merrell

Dr. Selman A. Waksman, discoverer of streptomycin, visited the plant and laboratories of the Wm. S. Merrell Co., October 29, to confer with Merrell scientific research men and company executives on the construction and equipping of the new Merrell building for research and manufacture of streptomycin.

Dr. Waksman, now connected with the New Jersey State Agricultural Experiment Station, has spent thirty years in research on soil microbiology.

In Dr. Waksman's honor, Thurston Merrell, president of the pharmaceutical concern, gave a luncheon at the Cincinnati Country Club.

Charlton Advanced by Reynolds

Albert H. Charlton has been named sales manager of the Aluminum Division of the Reynolds Metals Co., with headquarters in Louisville, Ky. He joined Reynolds in 1936 and was assigned to

ALBERT H. CHARLTON

the company's sheet mills in Louisville. Later he became assistant plant manager.

In 1940 he became sales representative for Reynolds in Detroit. The following year he returned to Louisville and, under W. G. Reynolds, helped set up the plants for prefabrication of aluminum parts for aircraft. He was made sales manager for the Philadelphia area in 1942 and in 1944 eastern sales manager for the Aluminum Division, with headquarters in New York.

Langers on Vacation

Dr. and Mrs. Langer are on a six weeks' vacation during which they will visit Canada, Havana and Rio de Janeiro.

Thurston Merrell, president of the Wm. S. Merrell Co.; Dr. Selman A. Waksman, discoverer of streptomycin; and Dr. R. S. Shelton, vice-president in charge of research of the Merrell company.

A MAN *is judged by the company he keeps!*

A MAN is judged by the company he keeps. And so a company is judged by the companies it services. Take Trans-Pac, for instance, and scan its roster of important clients. We're proud to service organizations like these. Proud to have them endorse our own high standards by letting us package their products!

Soon many new and superior packaging materials will be available. Whether it's pliofilm or glassine lamination, we can plan your package needs now. In addition to our own staff, we also work closely with the engineering and research divisions of the leading manufacturers of packaging supplies.

Our long experience dealing with diversified products enables us to supply the best in modern packaging. And you can count on Trans-Pac, too, for the fastest, most economical packaging service. We have facilities for handling any size job. Write to us for quotations.

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THE ANACIN CO. "WHITEHALL"
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TRANS-PAC SERVICES, INC.

402 WEST 52ND STREET, NEW YORK 19, N. Y.

Pinaud Names Axelrad

Howard R. Axelrad has been elected treasurer of Pinaud-New York. A lawyer and certified public accountant, Mr. Axelrad has been actively engaged in the practice of accounting for more than twenty years.

He is forty-one years old and received his Bachelor of Commercial

HOWARD R. AXELRAD

Science degree from New York University in 1924 and his degree of Bachelor of Laws in 1928.

A. C. Drury & Co. Celebrates a Quarter Century in Business

The silver anniversary of A. C. Drury & Co. of Chicago, marking 25 years of continuous service of that well known raw material house is being celebrated this year. In that span of time the small but ambitious concern doing a purely local business founded by Arthur C. Drury has grown under his enterprising and able direction into an internationally known organization supplying essential oils, aromatic chemicals and other raw materials.

The colorful business career of Arthur C. Drury began in 1911 when he joined M. L. Barrett & Co. of Chicago, then a leading firm in the Middle West, where his eager and energetic interest attracted the attention of his employers and the trade.

In 1912 he represented American manufacturers in Rio de Janeiro, Brazil. Upon returning to the United States, he entered business as Merz and Drury which was later dissolved. He then established his own business until enlistment in service in World War I. On his discharge from the service he traveled for the old firm of Rockhill & Vietor of New York out of the Chicago office of Frank Z. Woods, traveling in their interest in the Middle West, covering Minneapolis, St. Paul, Sioux City, Omaha, Kansas City, etc. In this territory he contacted the soap, pharmaceutical, cosmetic and flavoring extract industries and allied lines.

In 1920 he reorganized A. C. Drury & Co. and in keeping with the needs of the business in April, 1928, the business was incorporated. Mr. Drury was elected president and treasurer and has served in the same capacity since. The change in the corporate name in 1928 involved no change in the management or personnel of the company. However, Mr. Drury's father passed away March 13, 1944, and G. H. Suddard is no longer associated with the company, having retired some time since.

By 1933 the company had grown to such an extent that new and larger quarters became necessary and as a result nearly an acre of floor space was leased in that year in the building at 219 East North Water St., Chicago, for executive and general offices, warehouse and storage vaults. The same quarters are still occupied by the company, which has since expanded considerably, to the extent that all talc, zinc oxide, witch hazel, chalks, etc. are stored in a separate warehouse, from which it operates its trucking facilities, namely, Nelson Warehouse & Express Co., 1119 East 42nd Street. This affords carload position in all of these commodities at all times and justifies, it points out, the company's slogan—"The Largest Stocks In The West." At its present location at 219 East North Water St., a switch runs into the building and the company has received cod liver oil from Norway from the same bottom right at its back door, viz, the Chicago river. A block and a half east of the Wrigley Building and a block from the Tribune Tower, A. C. Drury & Co. has all these facilities in proximity of the near North Side of the thriving city.

At present the company is reputed to be one of the largest direct importers in the western field, of miscellaneous oils, waxes, gums and assorted chemicals—and possibly the largest direct importer of a diversified line. The slogan used for many years by the company "From Every Part of the Globe" is literally true for it has normally contacts in all European centers: Asia, China and Australia for direct imports for its own account on miscellaneous chemicals other than those handled by the firms it represents. Thus, the company imports, for example, filter paper and olive oil from Spain; lanolin and miscellaneous chemicals from Germany; talc from Italy; potash from Sweden; cod liver oil from Norway; essential oils from France; waxes, menthol, etc., from South America; eucalyptus from Australia; gum benzoin from Siam—cassia and anise from China.

The company also represents a number of well known raw material houses such as Sierra Talc Co., Thurston &

ARTHUR DRURY

Braidich, Harkness & Cowing Co., Colgate-Palmolive-Peet Co., Theodor Leonhard Wax Co., American Distilling & Mfg. Co., Laco Products, Inc., H. J. Baker & Bro., and the Tombarel Products Corp.

A. C. Drury & Co. announces that its new slogan in the post-war era is: "To Carry On for Bigger apd Better Service" with a continuation of its past performance to the trade.

The company enjoys membership in such representative associations as the Flavoring Extract Manufactuerse Association, Chicago Drug & Chemical Association, Essential Oil Association of U. S. A., Chicago Perfumery, Soap & Extract Association, The Chicago Association of Commerce, and other groups whose support definitely contributes to the development of the essential oil, aromatic chemical and allied industries.

Drug Packaging Lunch

About seventy representatives of the drug and proprietary manufacturers met for lunch November 27 at the Commodore during the 7th annual meeting of the Packaging Institute. Discussion covered problems submitted by the members on methods and on materials required for packaging. The program was under the chairmanship of W. O. Brewer, Calco Chemical Division, American Cyanamid Co.

It was agreed that the group will have a separate session in place of the usual luncheon conference at the next annual meeting, scheduled for November, 1946. in Chicago.

Packaging Institute Names Dearing

At the seventh annual meeting of the Packaging Institute it was announced that Major Albin Dearing, Eccleston, Md., has been named executive head of the Institute. Before entering the army where he served with the parachute troops, Major Dearing was director of public relations for Container Corp. of America, Chicago, and had done market research for Hercules Powder Co., Wilmington, Del.

ALBIN DEARING

A native of Jacksonville, Fla., he attended Sewanee Military Academy, the University of the South (Sewanee), the University of Florida and did several years graduate work at the French universities of Strasbourg and Grenoble.

DCAT Elects

The Drug, Chemical and Allied Trades Section of the New York Board of Trade held its 55th annual meeting and election at the Drug and Chemical Club, November 20. Guy L. Marsters, vice-president of Norwich Pharmacal Co., chairman of the Section, presided.

Lloyd I. Volckening, president of the Ivers-Lee Co., and chairman of the membership committee, reported that 117 firms had been added to the roster of the Section this year, bringing the membership to the all-time high of 618.

E. T. T. Williams, chairman of the executive committee of Becton, Dickinson & Co., was elected as representative of the Section to the board of directors of the New York Board of Trade.

The report of the nominating committee presented by its chairman, Ralph E. Dorland, Dow Chemical Co., was unanimously adopted and the following executive committee was elected to serve for the coming year: Harold M. Altshul, Ketchum & Co. Inc.; Carl M. Anderson, Merck & Co., Inc.; William H. Berg, The Borden Co.; Carle M. Bigelow, Calco Chemical Div., American Cyanamid Co.; Hugh S. Crosson, McKesson & Robbins, Inc.; James DeCesare, White Laboratories, Inc.; Frank G. Fanning, N. I. Malmstrom & Co.; William F. George, Hooker Electrochemical Co.; Harold C. Green, L. Sonneborn Sons, Inc.; Frank M. Head, Whelan Drug Co.; Philip B. Hofmann, Ortho Pharmaceutical Corp.; Joseph F. Kelly, Hagerty Bros. & Co.; Elvin H. Killheffer, E. I. duPont de Nemours & Co., Inc.; Robert B. Magnus, Magnus, Mabee & Reynard, Inc.; James H. Murray, Parke, Davis & Co.; Charles A. Pennock, Wm. R. Warner & Co.; Harold D. Pomeroy, G. S. Stoddard & Co., Inc.; John P. Remensnyder, Heyden Chemical Corp.; Fred J. Stock, Chas. Pfizer & Co.; Lloyd I. Volckening, The Ivers-Lee Co.

T.G.A. Scientific Meeting

The third meeting of the Scientific Section of the Toilet Goods Association was held at the Biltmore Hotel, December 6. Thirteen scientific papers were read during the all-day session.

Hooker Physical Laboratory

The Hooker Electrochemical Co., Niagara Falls, N. Y., has organized a physical research laboratory to provide physical analyses and controls for all phases of chemical work at Hooker.

L. J. BRADY

Dr. L. J. Brady, formerly a fellow at the Mellon Institute of Industrial Research is in charge of the new laboratory.

Hamel Advanced by Owens

Kenneth A. Hamel has been named publicity manager for the Glass Container Division of Owens-Illinois Glass Co. He joined the company in January 1944 and has been assistant merchandising manager for both the beverage and dairy container sales division for the last eight months. He was with the *Toledo Blade* for sixteen years.

Major Mennen in Japan

Major William G. Mennen, Jr., treasurer of the Mennen Co., Newark, N. J., on leave with the armed forces for the past four and one half years has been appointed to the Economic and Scientific Section of General MacArthur's Supreme Headquarters in Japan. Major Mennen is the highest ranking officer in the rationing and price control division and is heading this work in Japan.

WILLIAM G. MENNEN, JR.

After extensive experience in the United States as Medical Procurement Officer, Major Mennen completed exhaustive studies of American Military Government and of the Japanese language at the University of Virginia and Yale University before going to Japan.

FWDA to Meet in February

The Federal Wholesale Druggists' Association will hold its midyear meeting February 5 to 7 at the Hotel Pennsylvania, New York. John A. Crozier, manager of the Calvert Drug Co., Baltimore, is president of the association, and F. S. Dietrich, vice-president of the Mennen Co., Newark, N. J., is chairman of the manufacturers committee. Mr. Dietrich's committee is making the arrangements for both the midyear meeting and the annual meeting which is scheduled for early in September 1946.

Bristol-Myers Advertising Dept.

In a realignment of its advertising department, Bristol-Myers Co., New York, has named Robert B. Brown as director of advertising and market research and Joseph M. Allen as advertising manager. Both are assistant vice-presidents of the company.

John J. Clarey, Jr., for a number of years assistant advertising manager, has been named new products coordinator of the company.

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

December ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1945

New Low-Cost Alkyd Meets Current Need For Non-Quota Resin

S&W Aroplaz 1379 Is Versatile Resin Having High Phthalate Content

To answer the current urgent need for resins made from raw materials that are exempt from existing oil and rosin quotas, U.S.I. offers its new alkyd resin, Aroplaz 1379. A modified alkyd of medium-to-short oil length, "1379" is suitable for use in a variety of air-drying and low-temperature baking finishes, such as those for metal cabinets, toys, hardware and implements. It can also be used satisfactorily in metal primers and low-cost finish coats, and as a general utility vehicle.

Finishes made with S&W Aroplaz 1379 air-dry hard overnight and bake hard in one hour at 200° F. To obtain the best drying rates, finishes should be aged from 48 to 72 hours.

High in Phthalate

Although S&W Aroplaz 1379 is a very low cost vehicle, it has a high phthalate content and performs remarkably well in all but top-

(*Continued on next page*)

SPECIFICATIONS

Solution:	49-51% Solids in Mineral Spirits
Viscosity (G.H.):	X-Z
Color (G.H. 1933):	10-12
Acid value (solvent free basis):	10-16
Wt./gallon @ 25°C.:	7.7-7.8 lbs.
Oil Content (solvent free basis):	No reportable oil
Phthalic Anhydride (solvent free basis):	33%

Solubility: Complete in all petroleum and coal-tar hydrocarbons. Insoluble in ethyl alcohol. Compatible with many alkyds, varnishes and drying oils of low and medium viscosity.

Color Printing Saved by Yellows That Now Outperform Chromes

Ink Makers Plan to Continue Use of Benzidine Yellows Because of Their Lower Cost and Improved Workability

Well up among the war-born "substitutes" that have won a permanent place in American chemistry are the benzidine yellows, which, ink manufacturers say, literally saved multi-color during the war. Synthesized from acetoacetanilide and other U.S.I. "arylides", these benzidine dyestuff pigments, have demonstrated cost and pressroom advantages which will assure continuance of their use despite the return of prewar chrome yellows.

High Tinctorial Strength

Chief reason for the superiority of the new synthetic colors, according to one of the country's largest ink manufacturers, is their extremely high tinctorial strength—ten, perhaps more, times that of chromes. This high strength more than offsets the per-pound price differential between the two types of dyestuff.

From 6 to 66 America has adopted Superman, Dick Tracy and other "comics" as part of the family. Thanks to the new benzidine yellows America could follow them—in color—throughout the war.

In addition, it means that the ratio of pigment to vehicle is tremendously reduced. This fact, coupled with the smaller crystal size of the benzidine pigment, makes for a marked improvement in the workability of the final ink. The tendency for the pigment to separate and "pile" on the printing plates is eliminated. The ink flows and handles more easily.

The new dyestuffs are non-bleeding in water, and in dilute acids and alkalies. They are also quite resistant to melted paraffin, alcohol and other common solvents, except chloroform.

Good for Majority of Inks

Only disadvantages of the new yellows are their lack of opacity and their tendency to fade on long exposure to strong light. According to the ink manufacturer, however, both of these disadvantages are unimportant in the vast majority of cases. Currently, opacity is being obtained by the addition of small amounts of white pigment or chrome. In the future, when printing papers return to their prewar whiteness, there is expected to be less and less demand for opacity in the yellow

(*Continued on next page*)

Redwood Seen as Source Of Oxidation Inhibitors

Products derived from redwood chips have been found to be effective inhibitors of autoxidation in paraffin hydrocarbons, according to a recently presented technical paper.

The most effective of the products tested was purified redwood tannin prepared by extracting redwood with warm water and then dissolving the active tannin fraction in ethyl acetate. The ether-soluble tar and the phenolic fraction obtained by destructive distillation of redwood phlobaphene were also found to be effective inhibitors.

The redwood tannins were said to compare favorably with benzyl-p-aminophenol and catechol in inhibiting action.

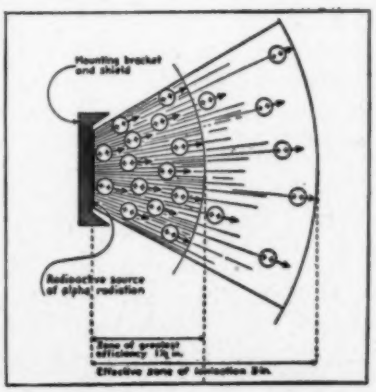
Rejuvenates Electrolyte By Addition of Acetone

Burrs, machine tool marks, roughness and other processing blemishes are sometimes removed from metal parts by a brightening electrolytic process employing a glycerine-hydrochloric acid electrolyte. Such electrolytes tend, after extended use, to become degenerated. A recent patent covers a method for rejuvenating such degenerated baths, by adding acetone in amounts up to 10 per cent of the volume of the bath.

New Radio-Active Device Eliminates Static Problems in Industrial Processes

A new radio-active device promises to afford an astonishingly simple way to end the fire hazards and production obstacles which static electricity presents in many manufacturing processes. This radio-active device uses alpha rays, given off by radium, to ionize the air near points where friction generates static. The ionized air, a conductor of static electricity, bleeds this unwanted static harmlessly off to ground.

The static eliminator consists of foil, impregnated with a radio-active material, which is attached by bonding to a non-radio-active, heavier metallic backing. This assembly is attached to the machine at the proper points. No other changes in the machinery are needed, and it is claimed that no unusual precautions need be taken to protect shop personnel, and service poses no problem.


Mounting bracket and shield
Radioactive source of alpha radiation
Zone of greatest efficiency 1½ in.
Effective zone of ionization 3in.

ADVERTISEMENT—*This entire page is a paid advertisement.*

December ★ **U.S.I. CHEMICAL NEWS** ★ 1945

New Low-Cost Alkyd

(Continued from preceding page)

grade whites. It is rated "fair" in color, color retention and flexibility. The latter characteristic, however, can be improved where desired by adding 5 to 10 per cent of O-body linseed oil (or other oils, vehicles or alkyds). Zinc oxide and similar reactive pigments should be avoided.

Samples are available upon request.

Drug Intermediate Made By New Claisen Reaction

A patent of recent issue describes an improved method of preparing 4-methyl phenyl acetone, an intermediate used in the preparation of therapeutic agents. Ethyl acetate and 4-methyl benzyl cyanide are reacted in the presence of sodium ethoxide to form alpha-(4-methyl phenyl)-acetoacetonitrile. Saponification of the cyano group yields 4-methyl phenyl acetone.

One use described for the intermediate is the preparation of alpha-(4-methyl phenyl)-beta methylamino-propane, a sympathomimetic producing effects similar to those of benzedrine.

Mixed Solvents Boost Soya-Bean Oil Yield

A writer in a British chemical magazine outlines a method for increasing the extraction of soya-bean oil. While 95 per cent ethanol will extract only 12 per cent, the addition of 10 per cent trichlorethylene boosts the yield to 50 per cent.

The less-inflammable, mixed solvent is completely miscible with all concentrations of soya-bean oil when heated. After it cools, the solution extract separates into a top layer of practically pure ethanol and trichlorethylene, which may be reused as it is, and a lower layer containing 50 per cent soya-bean oil.

"Arylide" Dyes

(Continued from preceding page)

ink. Traditionally, the yellow ink has had to be opaque because it is the first color printed; but if the paper itself is of good whiteness, there is no more reason for the yellow to be opaque than for the red and blue which are transparent.

As to light-fastness, it is the ink makers experience that benzidine yellows are good for "999 out of 1000" applications. Packages which must have long shelf life and billboards which must withstand exposure to direct sunlight are two typical exceptions.

Hansa Yellows

Predecessors of the benzidine yellows, the Hansa yellows have considerably higher fastness to light and are used for jobs to which the newer dyes are unsuited. While somewhat lower in tinctorial strength, the Hansas have the same advantages as the benzidines in making inks which have better flow and work better on the press. Their high resistance to the action of sunlight and alkalies also makes them desirable for use in pigmenting papers and protective coatings.

Synthesis and Tinting

Benzidine yellows are made by combining tetrazobenzidine with one of the aceto-acetarylides. Similarly, Hansa yellows are made by coupling "arylides" with diazotized aniline derivatives.

By varying the intermediates used, a great number of yellows can be produced having different shades and fastness to various agents. However, current practice is to make just a few benzidine yellows and then tint them with reds or oranges to produce the desired shade.

U.S.I. has developed some 14 different arylides of widely varying properties. Specifications on these intermediates may be obtained by writing to U. S. Industrial Chemicals, Inc.

The swing is to color! This up-to-the-minute press is especially designed to permit addition of color in newspaper printing, when desired. Chances are, the inks run on it will contain some U.S.I. products — resins, solvents, or dyes made from U.S.I. intermediates.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

Removing rust without sandblasting is the purpose of a new solution said to work by disintegrating the rust, and at the same time fortifying the metal against further corrosion. **(No. 007)**

USI

To recover paint and lacquer from spraybooths, and reclaim it for re-use, a new process is described as being highly economical and to require neither special skill nor special equipment. **(No. 008)**

USI

To handle dangerous acids safely, a new durable corrosive-resistant pump has been designed to remove acids from carboys without the use of air pressure. The plastic pump is reported to fit carboys of from 5 to 13 gallons capacity. **(No. 009)**

USI

A stamping ink for slick surfaces, developed especially for marking plastics, may also be used on almost any highly-polished surface, according to claims of its manufacturer. It is further stated that the ink is heat-proof and weather-proof. **(No. 010)**

USI

To clean leather, a new detergent is offered which is described as being both a cleaner and a toner. It is said to contain no chemicals harmful to leather. **(No. 011)**

USI

Joining thermoplastics to each other, as well as to paper, and other surfaces, is the advertised function of a new adhesive. **(No. 012)**

USI

Synthetic, fungus-resistant cord is offered for electrical assemblies, lacing and other applications where it is subject to attack by fungus, water, oils or flame. **(No. 013)**

USI

A plastic film, intended for use in pocketbooks and similar articles, is announced as being washable, flexible, tough, and resistant to most chemicals and to fire. A wide choice of colors is offered. **(No. 014)**

USI

To test plastics, a deflectometer is designed to record the amount of bend automatically on a stress-strain recorder, and to be usable on plastics of greatly varying rigidity, as it permits the operator to magnify recorded deflection by 5, 10, 20, 50, 100 or 200. **(No. 015)**

USI

To clean cement, a new detergent is formulated to penetrate the pores, emulsify grease and oils, and, under continued use, to bleach the cement surface. **(No. 016)**

USI

Synthetic orange pigment, said to have outstanding qualities of light and chemical resistance, is offered in limited quantities for research. Its suitability for paper-making applications is stressed. **(No. 017)**

USI

U.S.I INDUSTRIAL CHEMICALS, INC.

U.S.I.

ALCOHOLS
Ethanol (Ethyl Alcohol)
*ANSOLS
Ansol M
Ansol PR
*Registered Trade Mark

ACETIC ESTERS
OXALIC ESTERS
PHTHALIC ESTERS
OTHER ESTERS

INTERMEDIATES
ETHERS
FEED CONCENTRATES

ACETONE
RESINS
OTHER PRODUCTS

Lederle Establishes Fellowships

The establishment of two graduate research fellowships at the Philadelphia College of Pharmacy and Science by the Lederle Laboratories has been announced by Dr. Ivor Griffith, president of the college. The fellowships extend over a period of two years and afford the recipients the opportunity to do original research and, at the same time, complete the prescribed studies leading to the Master's degree. Inclusive of tuition, the awards total well over $1,000 a year.

The current recipients are Kenneth Avis, of Elmer, N. J., a graduate of the Philadelphia College of Pharmacy and Science, just returned from two and one-half years service with the United States Navy; and Stanley Scheindlin, Philadelphia, a graduate of the School of Pharmacy of Temple University.

Goldet of Pinaud Visits Here

Roger Goldet, general manager of Pinaud-Paris, has been making a month's visit with the New York organization. This is his first visit to this country since August 1939. In speaking of the perfume industry, Mr. Goldet stated that supplies are coming in at a better rate; that the glass industry is producing very well and that Pinaud-New York should have some importations of French perfumes in the near future. Mr. Goldet plans to take an active interest in the expansion of the American firm and will come to this country frequently.

ROGER GOLDET

Martin Revson Back at Revlon

Martin Revson has returned to Revlon Products Corp. after twenty-nine months in the army. He will fill the newly created post of executive assistant to the president, and be responsible for the direction of the Revlon Export Corp.

Chase Joins Hutchinson

Irving Edgar Chase has joined the executive staff of D. W. Hutchinson & Co., essential oils, New York. Mr. Chase was formerly director of sales of William D. Neuberg Co. and before that was assistant export manager of Magnus, Mabee & Reynard. He was also engaged for many years in export-import work with W. R. Grace & Co. in New York and in California.

McNally—Gair Art Director

Robert Gair Co., Inc., New York, manufacturer of paperboard, folding cartons and corrugated and solid fibre shipping containers, has announced the appointment of Edward J. McNally as art director.

EDWARD J. McNALLY

Mr. McNally pursued academic, commercial and art courses at St. Clair Academy, St. Laurent College, Mechanics Institute, and at the Julian Academy, Paris. He studied photography under Ansel Adams.

For fifteen years prior to joining the Gair company, he was art director of the Dixie Cup Co.

Francois de Laire Visits Here

Francois de Laire of Fabriques de Laire, Issy, France, has been in this country for his first visit in six years. Manufacturers of aromatic chemicals have not faced any serious destruction of equipment, according to Mr. de Laire, but a great deal of work has been necessary to put this equipment into condition for the manufacture of aromatics. Raw materials and coal are still a serious problem. Out of ten materials necessary for some process, eight may be available but manufacturing cannot begin until all ten are at the factory. Next spring will see resumption of some export shipments, Mr. de Laire believes, and one favorable factor of this period is that research had more time for creative development.

Sibley on Washington U. Board

George H. Sibley, vice-president, director, and general attorney of E. R. Squibb & Sons, has been elected to the board of trustees of the American University, Washington, D. C.

GEORGE H. SIBLEY

Mr. Sibley has long been a leader in civic, state and national affairs. He is president of the Society for Prevention of Crime. A graduate of Princeton University and Harvard Law School he was in active service in the U. S. Naval Reserve in World War I.

Hindle Reports on Britain

J. L. Hindle, president of Standard Synthetic, Inc., has returned to New York after a visit to the London factory of the company. He reports that business in London is rapidly recovering from the effects of the war. Imports of essential oils are still controlled entirely by the British Ministry of Food, but applications for supplies are granted liberally to previous users. Demobilization in Britain is slow and there is a shortage of manpower but enough of the staff of Standard Synthetics Ltd. has returned to enable work to be resumed at the London factory.

Francois Goby Visits Here

Francois Goby, Tombarel Freres, Grasse, France, is in this country for his first visit since the war. Mr. Goby reports that every effort is being made to take care of American requirements and that a rigid policy of exporting the same relative percentage of his production to this country as applied before the war will be maintained. He stated also that France is anxious to import American oils and also equipment needed by the Grasse industry but that import licenses are still difficult to get because of priorities for more essential commodities.

SCENTS that make sense...

Coumarin Monsanto, a synthetic odor principle, used to enhance the bouquet of soaps and perfumes; also to amplify the more delicate aroma of vanillin.

IN DOLLARS AND CENTS

Methyl Salicylate, U.S.P., Monsanto, Synthetic oil of wintergreen, used to impart pleasant odor and flavor to mouthwashes and dentifrices; also as a masking agent.

Ethavan, Monsanto's Ethyl Vanillin*, a synthetic with a "vanilla-like" odor and flavor, used as an aroma fixative in the formulation of soaps and delicate perfumes.

Logical economies are brought about by the use of these *synthetic* odor principles. Ever since soap, perfume, cosmetic and drug manufacturers first declared their independence of the crop failures, shipping space shortages and other uncertainties that affected the market in *natural* scenting agents, Monsanto has been a favorite source of supply of synthetic aromatics.

Many leaders in these industries use Monsanto's synthetic scenting and flavoring materials exclusively. They have found, through long experience, that the high uniform quality and unvarying strength of Monsanto's synthetics are absolutely dependable . . . that they *cost less in the long run*.

Monsanto's Ethavan, for example, has approximately three times the flavoring strength of vanillin. Its aroma is richer and more pronounced. It "stays" longer—even though unusually high or low temperatures are used in processing. Some manufacturers use small amounts of Ethavan for just accenting aroma, or bouquet.

If you are not among those now using Monsanto's synthetic scents and flavors, why not give them a trial? We'll gladly send samples for your experimentation—without obligation, of course. Just get in touch with our nearest office, or write MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri.

MONSANTO CHEMICALS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Seattle, Montreal, Toronto.

**Ethavan, Reg. U. S. Pat. Off.*

Riches-Nelson Formed

George E. Riches and R. Albert Nelson have announced the organization of Riches-Nelson Inc. The offices are located at 62 William St., New York 5, and the telephone is WHitehall 4-2936.

Stokes Appoints Williams & Wilson

The F. J. Stokes Machine Co., Philadelphia, has appointed Williams & Wilson, Ltd., with offices in Montreal, Toronto and Windsor, as its exclusive representative throughout Canada, east of Manitoba.

The company has appointed Harold G. Roman of Portland, Conn., as its New England sales representative.

Du Pont Denies I. G. Connection

E. I. du Pont de Nemours & Co. has issued a statement in answer to recurring reports from Germany giving the impression that the Du Pont company is a substantial stockholder in I. G. Farbenindustrie.

According to the statement, at one time Du Pont did have an investment of $2,395,316 in I. G. Farben. This was approximately one-half of one per cent of the issued shares of that company. In 1933 Du Pont began disposing of its investment in I. G. This was difficult because of currency regulations and blocked mark requirements. However, the I. G. stock was fully disposed of in 1940, at a loss of $671,406 and shares in Dynamit A. G., controlled by I. G. Farben, were sold at the same time at a loss of $534,359.

Moffett Drug Appoints Two

Moffett Drug Co., Inc., New York, has appointed two additional members to its sales staff. Edmond J. Ricketts of New Haven, Conn., will represent the company in the New England territory and J. W. Brinkin of Laurelton, N. Y., will assist I. S. Fankuchen in the Greater New York area.

As of December 1, the company, manufacturer of vitamins, drugs and cosmetics, occupied greatly increased space in a new plant, located in East Newark, N. J.

Heckman Heads Warner Purchasing

William J. Heckman has been appointed general purchasing agent of William R. Warner & Co., Inc. Mr. Heckman will coordinate and direct all the purchasing activities of William R. Warner & Co., Inc. and its subsidiaries, Richard Hudnut, Standard Laboratories, Inc., Schering & Glatz, Inc. and Marcy Laboratories, Inc.

WILLIAM J. HECKMAN

Reynolds Metal Appointments

James Birnie, Jr. has been appointed art director for the foil division of Reynolds Metal Co. and Frank Condon has been appointed his assistant.

Mr. Birnie, a graduate of Yale University School of Fine Arts, started his commercial art career as art director of a New York advertising agency. In 1938 he opened his own commercial art office in Richmond which became the largest commercial art studio south of New York and was maintained until 1943 when the war took many of its personnel. From then, until he joined Reynolds, Mr. Birnie was art director of the Richmond Times Dispatch and Richmond News Leader.

JAMES BIRNIE, JR.

Mr. Condon has been package designer and consultant to the American Brass Co. and Anaconda Wire and Cable Co.

Regina Tierney Joins Affiliated

Regina Tierney has been made advertising director of Affiliated Products, cosmetic division of American Home Products. She will direct the advertising for Louis Philippe, Edna Wallace Hopper, Neet Jocur, Heather and Kissproof.

Stetson Joins Bri-Test

R. W. Stetson has joined Bri-Test Products Corp. as plant manager and is now engaged in the design and layout of equipment for the company's newly acquired plant at 109 Avenue L, Newark, N. J.

Mr. Stetson, Maritime Service engineering officer, has just been released from service. He went overseas shortly after Pearl Harbor as a service representative for Bell Aircraft attached to the Army Air Forces in the Southwest Pacific. Before the war he had been in Bell's inspection division and assistant plant superintendent of the Northam Warren Corp.

Frank F. Law (left) vice-president of Wyeth, Inc., congratulates Capt. Lowell T. Coggeshall, USNR, as winner of the Gorgas Medal this year. Irvin T. Bell, president of the Association of Military Surgeons of the U. S., looks on.

ISOPROPYL ALCOHOL AVAILABLE FOR:

SHAMPOOS: Isopropyl Alcohol aids in cleaning hair and scalp thoroughly and in leaving hair soft and lustrous.

HAIR AND SCALP PREPARATIONS: Isopropyl Alcohol as a vehicle for hair and scalp preparations aids the cleansing and antiseptic value of the tonics.

STERILIZING SOLUTIONS: 40% Isopropyl Alcohol will kill dried Bacillus Coli in ¼ minute. 50% Isopropyl Alcohol is equivalent to 70% ethyl alcohol for killing Bacillus streptococcus and staphlococcus.

BODY RUBS: Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

FACE AND HAND LOTIONS: Isopropyl Alcohol evaporates slowly, has little tendency to dry the skin, and aids in keeping the skin soft.

AFTER SHAVE LOTION: Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

STANDARD ALCOHOL COMPANY

26 BROADWAY NEW YORK 4, N. Y.

Toiletries, Inc.

- Private Label Cosmetics Exclusively.
- Consult us in connection with your cosmetic manufacturing problems.
- Our 25 years of experience in the cosmetic and allied fields qualifies us to advise you.

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For Perfect Emulsions of Fixed and Volatile Oils

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For Dependable Syrup of White Pine Compound (N.F.)

Therapeutically reliable. Uniform in color, odor and flavor. So highly concentrated, a single pound yields approximately 20 pints of Syrup. Eliminates variation in quality and appearance of finished product.

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A natural vegetable compound, semi-liquid, mucilageneous, almost entirely odorless. Mixes readily with oils and water. Ideal substitute for Quince Seed, Gum Tragacanth, Irish Moss, and Flaxseed bases

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Extensively copied, never duplicated. Combines extreme whiteness with wholly neutral taste, low moisture content, very low residue of alcohol, water and sodium carbonate, resistance to varying temperatures, good meshing quality and non-hardening, non-rancid properties.

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THE REFINERY OF CONTROLLED SPECIALIZATION

ENGLEWOOD, N. J. **Refinery: — WARREN, PA.**

It's FAST

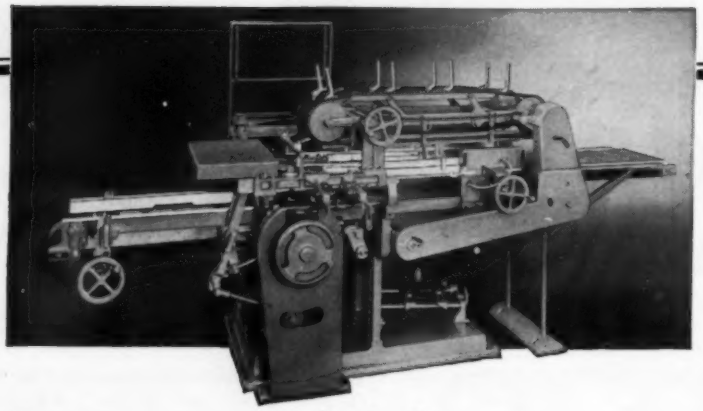
Will wrap 100 packages per minute

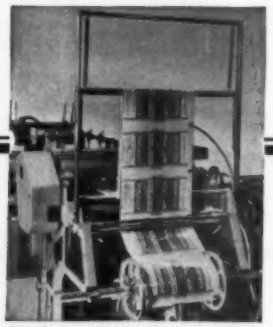
It's QUIET

No harsh motions—a promise of long life

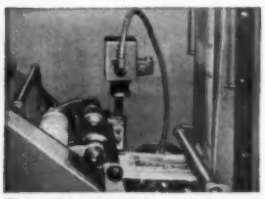
EXTREMELY ADJUSTABLE

Can be made to accommodate over a dozen sizes





Vertical position of paper slackener saves floor space and is more convenient when changing paper reels.



Printed material in roll form is accurately registered by electric eye.

Hand-wheels make it easy to adjust machine for different sizes.

And it sets a new high in wrapping perfection

Here's a machine that answers today's call for better and more efficient packaging—a machine that is adaptable to a remarkably wide range of products and various forms of wrapping.

This new FA model embodies the latest and finest in machine design and construction. Just to hear how quietly it turns out 100 packages per minute is convincing proof of its superiority. All harsh motions have been eliminated.

The product is handled with extreme gentleness and always on an even plane. Improved heat-sealing units insure firmer, neater seals. An advanced electric-eye mechanism provides absolutely accurate registration of printed wrapping material in roll form. Its new type paper feed and improved transport mechanism save valuable floor space. And it offers new ease and speed of adjustability—a decided advantage when numerous sizes of packages are wrapped.

Write today for our new FA Leaflet.

PACKAGE MACHINERY COMPANY

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18 Dickens Ave., Toronto 8

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By Francis Chilson

Industrial Consultant

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Temperature Regulator

A self-contained, spring loaded, internal pilot, piston operated Temperature Regulator for steam service, has been announced by Leslie Company, 77 Delafield Avenue, Lyndhusrt, N. J., makers of regulators, controllers and whistles.

A prominent feature of the new regulator is duo-matic control, whereby both accurate temperature regulation and pressure control are obtained simultaneously with a single regulator. Piping is this simplified and installation costs materially reduced.

The new regulator has a wide range, rugged thermostatic element with 100° F. adjustable temperature range. It is single-seated for positive dead-end control. It is equipped with metal diaphragms, has no bellows or packing glands. Leaks are eliminated and minimum attention is required.

All wearing parts are renewable. One hundred per cent interchangeability allows complete overhaul without removal from the pipe line. Corrosion and wear resistance is obtained with the use of stainless steel hardened wearing parts. Vital parts are hardened to at least 500 Brinell.

A vapor filled thermostatic element acting through the upper diaphragm and lever opposes pressure limit spring and determine the steam pressure delivered by regulator to heat exchanger. Manual compression of the limit spring determines maximum outlet pressure and opens controlling valve admitting high pressure steam from inlet body port to top of piston which opens main valve. The outlet steam pressure acting under steam diaphragm balances compression of limit spring, throttling controlling valve and limiting the maximum outlet pressure.

The temperature at which the vapor pressure starts to oppose the limit spring and decrease outlet steam pressure is set on the adjusting spring. This spring opposes the vapor pressure through the large upper diaphragm and by means of this spring the temperature at which all steam to heater will be shut off can be accurately set.

A temperature drop of 1° F. at bulb reduces vapor pressure, allowing limit spring to open controlling valve and deliver an increased steam pressure to heat exchanger.

Therefore, outlet steam pressure is always directly proportional to the change in temperature at bulb and this pressure is automatically maintained regardless of the volume of steam used by heater or variations in supply pressure.

Improved "Eureka" Tablet Machine

The "Eureka" Tablet Compressing Machine, thousands of which are in use by pharmaceutical manufacturers and pharmacists all over the world, has been improved in design and strengthened in construction, to make it more widely useful in both laboratory work and the manufacture of tablets of various kinds where only small or moderate quantities are required.

Improvements include a more efficient feeding device for handling materials difficult to feed; general strengthening of the frame; new ejection cam milled to give smoother action; finer adjustment of the lower plunger which gives greater accuracy and uniformity in the production of small tablets such as hypodermic and titurate tablets.

The motor-driven model can be used efficiently for the production of pharmaceutical specialties, and is ideally suited for research laboratories. Production is up to 100 tablets per minute. Maximum tablet size is ½" diameter, depending on material, with maximum die full of 7/16". Pressure is 1½ tons. The machine stands 24" high and occupies only 12" x 18" bench space. A hand-operated model is available. Either machine will produce tablets fully equal in quality and appearance to those made on larger machines.

For details of this and other automatic tablet compressing machines, write F. J. Stokes Machine Company, Philadelphia 20, Pa.

Where you see this name

a DRYing job is being done...

AIR—GASES—ORGANIC LIQUIDS

Lectrodryer engineers are DRYing specialists. We make no claim to being anything more. True, we've been called in on problems by every industry you could name, and have learned a lot about what makes them tick. But we've stuck to the one job—DRYing air, gases, certain organic liquids.

Many of the tasks assigned to Lectrodryers are nothing the novice should tackle. Dewpoints below −110° F. are not unusual. Air, gases and organic liquids are handled in tremendous volumes.

New DRYing problems intrigue us. When solved, that industry has doubtless made a big step forward. Processes are placed on a scientific basis. No more working with materials or in atmospheres of varying moisture content.

Bring your DRYing problems to a specialist. PITTSBURGH LECTRODRYER CORPORATION, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birmingham Electric Furnaces, Ltd., Tyburn Road, Erdington, Birmingham.
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LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

PITTSBURGH
LECTRODRYER
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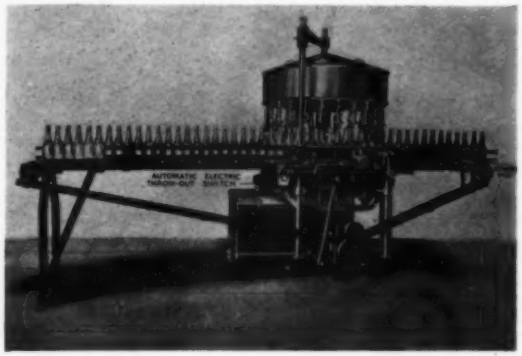
Reg. U.S. Pat. Off.

New Rotary Filler

Amon-Schulte Co. announce a superior electric automatic high speed rotary filling machine—The Asco-Dunn Design. This machine has many exceptional features which make it highly desirable to those plants who wish to step up the volume of their production and lower their filling costs in order to meet competition in this post-war period. The tank is equipped with an automatic float control maintaining an established level of liquid during operation for rapid, uniform filling. The cover is tight fitting and may be removed for cleaning by hand without the use of tools. Such features assure sanitation at all times.



Filling tubes are of patented construction, which cut off the flow of liquid both at the top in the tank, also cut off at the bottom of the tube. This cut-off is automatic. These tubes can be made of monel metal, stainless steel or brass triple silver plated.

The filling range is from 2½ to 32 oz. capacity. Any shaped container, taper shape included. Container mouths may range up to 3½ in. in diameter. Adjustments are quickly and easily made. The attendants need not be highly skilled operators.

The capacity and filling speed, depending on the size of the bottle and flow of the material, range from 55 to 160 containers per minute. Automatic safety features provide for automatic stopping and locking in position should anything happed to any one of the containers. Should anything happen to the crowner or closing machine, the filling machine will also automatically stop. The ASCO filling machine is designed for use with all types of liquids, ranging from heavy viscus syrups, chili sauce, through to juices. Containers may be bottles, cans, jugs or heavy paper containers, for liquids.

The Asco-Dunn is built in several models ranging from small hand operated designs, up to the large rotary high speed power operated model.

Color Matching

The new Analyte North Light Comparator for color matching has been announced by Analyte Instruments, Inc., 1450 Broadway, New York 18. The following claims are made for this instrument: color matching is said to be stepped up to higher definitions than ever before obtained in color matching lamps; has both incandescent light and Analyte north light for contrast, said to give extraordinary color separations which reduce matching errors to a minimum; the Analyte Comparator is said to be the nearest reproduction of north light in existence, according to well-known authorities; the Analyte spectrum is said to be completely continuous, consisting of overlapping bands.

Dr. Chauncey Starr in ascertaining the quality of Analyte in the Russell Sage Laboratory, Department of Electrical Engineering and Physics, Rensselaer Polytechnic Institute, reported: "This light may be considered the equivalent of north sky light. The spectrum is completely continuous, consisting of overlapping bands. As far as I am aware, no other non-incandescent source gives a spectrum that compares with this one for continuity and lack of peaks."

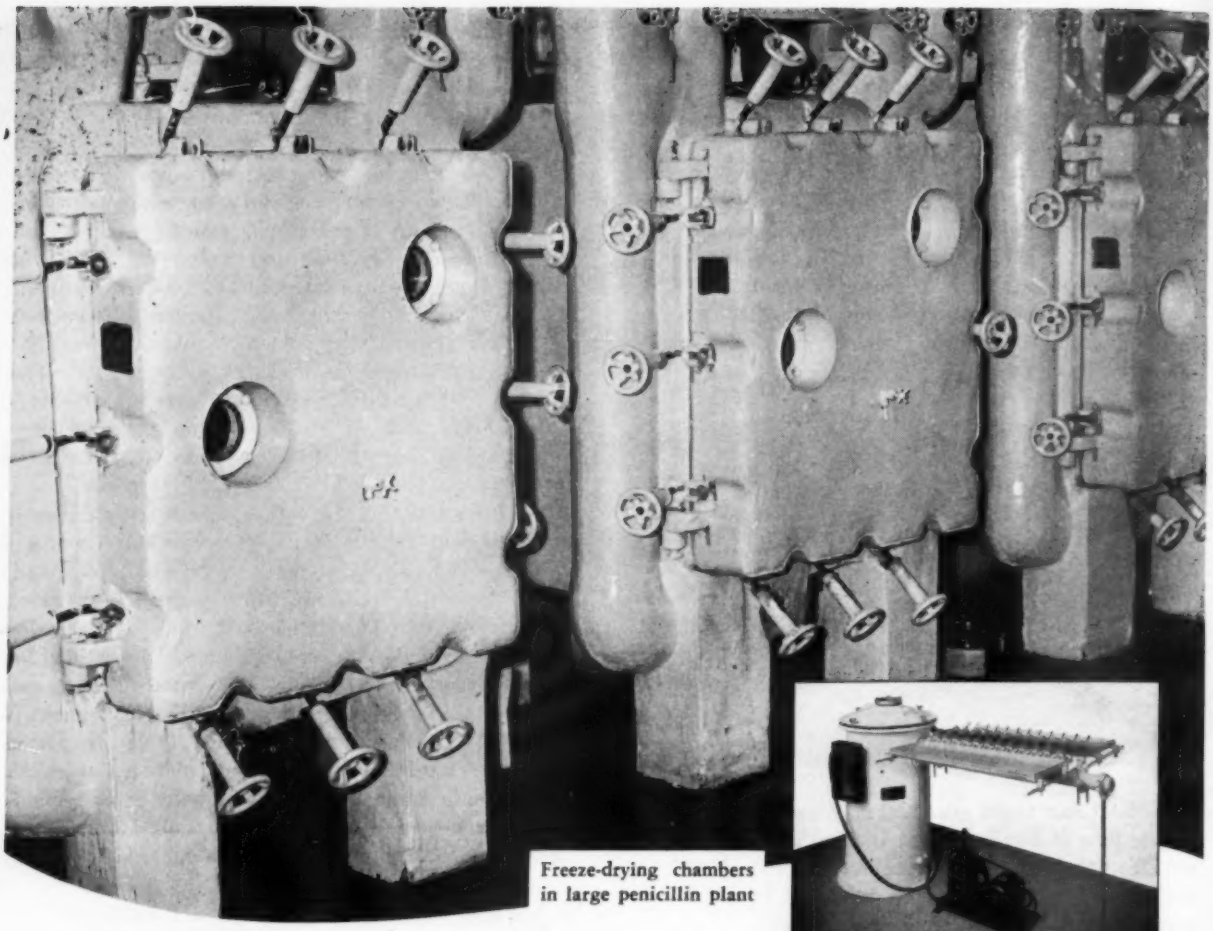
The instrument itself has been scientifically designed for maximum facility of use and operation, and includes the following features: foot or hand controlled, automatic cut-off when not in use, especially designed to draw a piece of goods across its face, light shields control color matching areas, folding shelf provided for matching small swatches or other small articles, and an adjustable tray for two heights. The instrument is easily moved being compactly built. It can be placed anywhere in mill, shop, laboratory, show room—work bench, table or shelf. Built of quality steel—handsomely enalemed—operates on 115 Volt A.C. current. Measurements, 20" x 20" x 15"—weight, 120 pounds.

Aging Bath

The Precision Scientific Company—1750 N. Springfield Avenue—Chicago 47, Illinois has recently developed a new Aging Bath.

This new bath is an oil immersion type for aging rubber or elastomers in oils or liquids in test tubes, according to ASTM D-471 and D-735.

These tests are intended for use in estimating the comparative ability of rubber and other elastomeric



Freeze-drying chambers in large penicillin plant

Hospital-size freeze-drying apparatus

FREEZE-DRYING

KEY TO UNLIMITED PRESERVATION, WITHOUT REFRIGERATION, OF PLASMA, PENICILLIN, SERUMS AND OTHER BIOLOGICALS

Stokes Lyophile-Cryochem freeze-drying equipment for desiccation from the frozen state, has been a vital key to the development of the Blood Plasma and Penicillin Programs. It is equally successful in the preservation of serums and other labile biologicals. The method used is Drying by Sublimation* under high vacuum.

Stokes pioneered and commercially developed this method and the equipment for it in conjunction with the University of Pennsylvania and Sharp and Dohme. Today, more than 275 Stokes freeze-drying units are in use throughout the United States and 24 foreign countries . . . in laboratories, hospitals, universities, government health services and commercial plants.

Stokes engineers and manufactures complete equipment for the process, from test tube to plant-scale capacity. Facilities and authoritative assistance are available for research, development and application of this process. A complete pilot plant in the Stokes Laboratory is used for tests and demonstrations. Our technical staff invites your consultation.

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5932 Tabor Road, Philadelphia 20, Pa.

Journal of Immunology, Vol. 50. No. 1, 1945

50th year of Service to Industry

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compositions to withstand the effect of immersion in oils and liquids. It may be used to secure comparative data on which to base judgment as to the service quality, and is especially useful in research and development work.

Capacity of aging bath, 24 test tubes, 38 mm dia. x 200 or 300 mm long. The test tubes are supported in an adjustable rack which can be readily removed when desired. Rack is made of stainless steel and rests directly in the bath. The top shelf of the rack guides the condenser in a vertical position.

Temperature of bath is 35 to 200° C., with an accuracy of plus or minus 1° C.; steel-sheathed immersion heaters controlled by an adjustable, hydraulic thermostat heats the bath providing uniform, constant temperature; a ball-bearing, fully-enclosed resilient-mounted motor stirrer provides complete circulation.

Interior or bath made of stainless steel, exterior of galvanized iron finished in high temperature aluminum. Three inches of glass wood insulation is provided on sides and bottom.

Overall dimensions, including rack: 49″ high, 24″ wide, 24″ deep. Oil capacity—19 gallons. Support stand, with upper and lower shelf, for bath can be furnished. It is 24″ high.

Electrical characteristics: 115 Volts, 60 Cycles, A.C., 3,000 Watts.

This bath can also be used for aging rubber and elastomers in air in test tubes. Condenser tube rack and test tube holders can be easily removed making it an ideal bath for general utility work. Further details on request.

Electric Lift Truck

Newly added to the Yale line of materials handling machinery is the Worksaver Electric Truck. With power for lifting and power for travel, the Worksaver relieves its operator of all physical strain. Compact and easily controlled, it can be maneuvered in congested areas, along narrow passages, and around sharp corners without waste of time or effort.

The Worksaver actually reduces materials handling to little more than a strolling and steering operation. A man or woman operator can pick up and "walk off" with loads up to 3 tons merely by using finger-tip pressure on dual cam controls located immediately beneath the hand bar-grip. These controls are designed so that when finger pressure is released, they return to neutral—cut off the power. Two forward and two reverse speeds are provided.

The elevating unit on the truck consists of a high-torque electric motor which operates a Yale-designed high-pressure hydraulic gear pump, which, in turn, activates a ram. Lifting and lowering is controlled by a convenient switch placed on the front of the battery compartment. The hydraulic ram operates in a honed cylinder, to provide long, efficient operation; and the electric control and valve mechanism are interlocked, to eliminate overtravel of the lift.

When a load is deposited, a special type of hydraulic release check cushions the descent, thus protecting load, floor, and operator.

The drive motor, located at the base of the steering handle, is a high-torque, ball bearing type. A drive pinion, mounted on its armature shaft, operates through a double-reduction spur-geared unit, running in lubricant, to drive a ten-inch diameter, rubber-tired front wheel. The drive unit is mounted on a 16″—diameter ball bearing turntable, immediately above the front wheel. Steering merely involves turning the turntable with the steering handle. The design of the front assembly is such that the truck can be turned in its own length.

Power for both the elevating and drive motors is obtained from a lead or alkaline battery housed in a compartment which is an integral part of the truck chassis. This compartment has a hinged cover and removable sides for convenient charging and change of batteries.

The main frame of the Worksaver is of heavy formed bar and plate steel, arc-welded into a strong and durable unit chassis. A continuous channel bumper reinforces the entire power unit assembly and battery compartment, and provides great travel stability.

The load elevating linkage is of patented Yale design, which affords maximum grade clearance.

The Worksaver is available in two types: (1) platform, (2) pallet. The former is designed to handle single unit loads, consisting of a crate, bale, etc., or multi-unit loads on skids or in skid bins up to 6,000 lbs.; the latter to handle single or multi-unit loads which are "palletized", up to 4,000 lbs.

The platform of the platform type Worksaver is of heavy formed steel plate, with apron on sides and at front end to give added strength and protection. Platforms are available in seven different lengths, ranging from 36″ to 72″, in 6″ steps. Maximum overall length of this truck thus varies from 70¼″ to 106¼″. Overall width is 31″, and overall height (at the battery compartment) is 27¾″. Rear wheels come in 6″, 7″, and 10″ diameters.

The U-shaped frame of the pallet model has the same sturdy construction as the platform type. The forks are 9¼″ wide, with 8½″ in between. Fork lengths range from 36″ to 60″, in 6″ steps.

Both single and double-faced pallets can be handled with this truck, the forks being equipped with Yale-designed roller trains which slide easily over the lower face boards of double-faced pallets.

Important safety features are found in the mechanism of the Worksaver. When the cam controls on the steering handle are at neutral, the brake is "on." When the steering handle is in vertical or horizontal position, the brake is automatically applied and the power is cut off. This arrangement not only gives the operator complete control of the truck on ramps, but, in the event the handle is dropped by accident, the truck is halted immediately.

The Worksaver is illustrated and described in a new catalog which will be sent on request. Write The Yale & Towne Manufacturing Co., 4530 Tacony St., Philadelphia 24, Pa.

Corrosion Resistance of Glass

Growing interest in the possibilities of heavy plate glass tanks for chemical processes has been shown by many requests for more exact data on the relative inertness of plate glass as compared with common materials used for tanks, it was brought out at the meeting of the Pittsburgh section of the American Ceramic Society Oct. 12. Answers to the commonest questions on this subject were answered there by M. S. Tarnopol and A. E. Junge, research laboratory, Pittsburgh Plate Glass Co., who presented a paper on the "Resistance of Plate Glass to Alkaline Solutions."

It is generally known that glass is highly resistant to the common inorganic acids excepting, of course, hydrofluoric. The actual rate of penetration by the common inorganic acids would be perhaps 1/16 inch in 100 years, or 15 microns per year if held at 150° F., it was pointed out. The attack of the more corrosive alkaline solutions is somewhat faster at this temperature, ranging up to about 850 microns or 0.85 mm. per year for 5 per cent sodium carbonate, and higher at higher temperatures and concentrations.

However, the authors concluded from careful tests that plate glass can adequately withstand most alkaline solutions up to 150° F. and some alkaline solutions at much higher temperatures, where staining is not an important factor. Their investigation showed also that scale had little effect on corrosion rates and that appearance of the glass gives no indication of the amount of corrosion.

Test specimens were cut from plate glass manufactured by the continuous flow tank process. Their approximate composition is 72 per cent SiO_2, 14 per cent Na_2O, 11.5 per cent CaO, and 2.5 per cent MgO. They were immersed in solutions of sodium carbonate, sodium pyrophosphate, sodium hydroxide, potassium carbonate and potassium hydroxide, and results obtained by determining loss of weight at 5-day intervals up to 20 days.

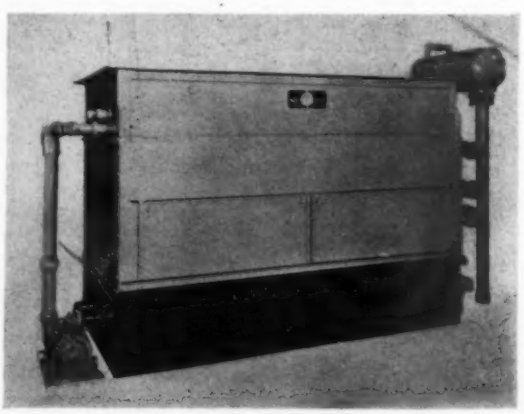
At 150° F., concentrations of 5 per cent alkaline solutions produced maximum rates of penetration. At 180° F., however, the rate of penetration by sodium carbonate reached a maximum of about 3.4 mm. per year at a concentration of 11 to 12 per cent. Increasing the concentration above 10 per cent did not alter penetration rates appreciably. In general, the rate of reaction appeared to approximate the old rule of doubling for each 18° F. increase in temperature. Potassium compounds acted slower than sodium salts, and sodium hydroxide slower than sodium carbonate and sodium pyrophosphate for this type of glass, the authors found.

Graphical data were presented to show penetrations and penetration rates of 5 per cent alkaline solutions at 150° F., a comparison of sodium hydroxide and sodium carbonate penetration at three temperatures, the effects of alkaline concentrations up to 20 per cent on penetration rates, and the effect of temperatures up to 210° F. on penetration by 30 per cent sodium hydroxide.

Liquid Cooler

The Niagara industrial liquid cooler furnishes refrigerated cooling water or any aqueous solution for industrial uses, especially the cooling of water to the lowest possible temperature above freezing for air conditioning or water cooling jackets—or in chemical, photographic and industrial processes—or as used in milk plants, bakeries and other food industries.

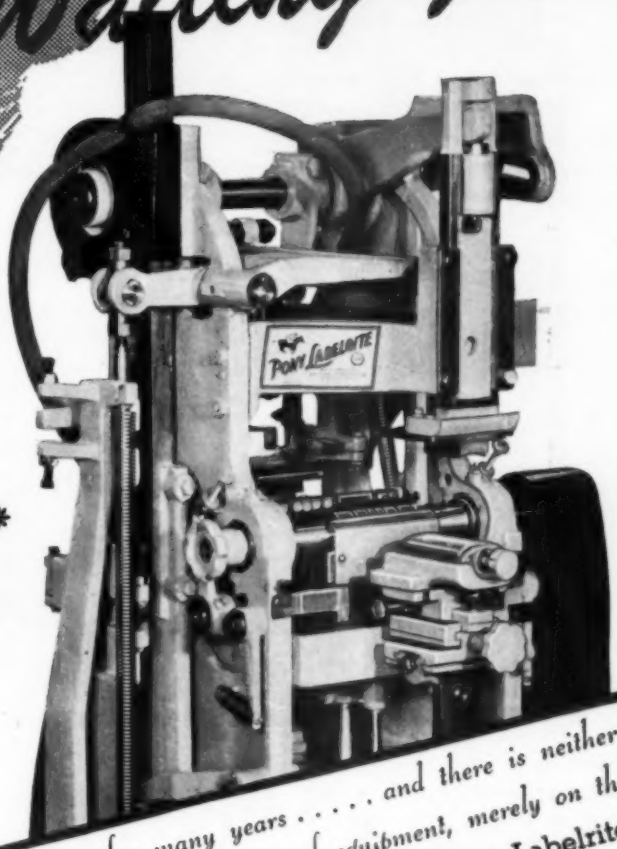
The method used is to spray the cooling water over banks of coils in which the refrigerant is expanded. The water falls into a tank and is recirculated independently of the distributing system, thereby gaining the closest control over temperatures and efficiency in heat transfer regardless of intermittent cooling operations or variations from maximum to minimum cooling load. By means of newly developed coil arrangement and design, capacity increases of 50 per cent to 100 per cent are gained over the company's previous equipment in comparable sizes. The result is equipment of greater compactness, capacity and rapidity of cooling as well as



absolute temperature control. It is possible to produce 33° water constantly without danger of damage from freezing—as the system is open and does not depend for safety on the proper functioning of the back pressure regulating valve. To provide temperatures below freez-

Worth Waiting For—

PONY LABELRITE*



You are going to be in business for many years . . . . . and there is neither economy nor wisdom in buying an inferior piece of equipment, merely on the strength of getting it a couple of months sooner . . . . . **If Pony Labelrites were ordinary machines, maybe you could get them sooner, too! Ponies are not ordinary. They include the vacuum principle of label handling and the twin-roller method of label applying.**

We hope to improve shipping time—but they're WORTH waiting for anyway!

*Reg. U. S. Pat. Off.

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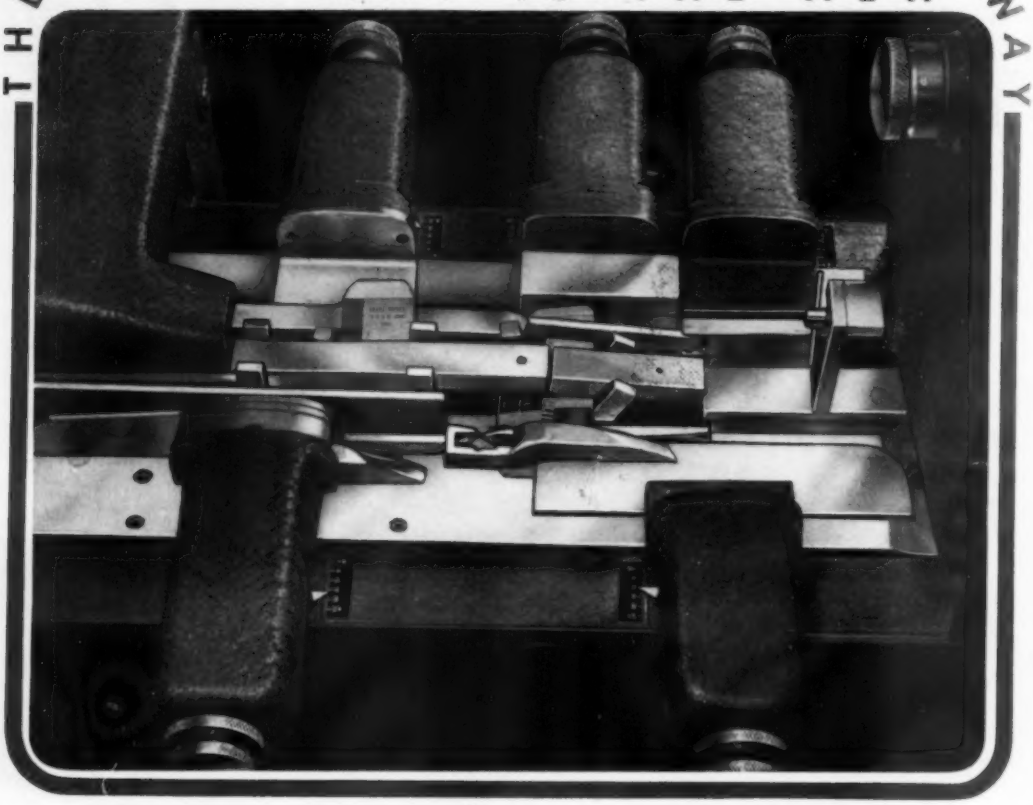
THE ROSS WAY IS THE NEW WAY



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Precision built for speedy, accurate adjusting, when changing carton sizes. No mechanical means used to form and tuck flaps in cartons. Note scale with indicator for precision adjusting. Charts supplied for accurate recording of adjustments when resetting machine for same job. Changes can be made in from ten to fifteen minutes. It is fully automatic for setting up and tucking the end of folding cartons.

The same features are available on the ROSS fully automatic machine *(loading and closing both ends of either tuck or sealed carton.)*

PRECISION PARTS • SELF OILING • DIAL CONTROL
VERSATILE ADJUSTABILITY • MASTER SPEEDRANGER

A. H. ROSS and Co.

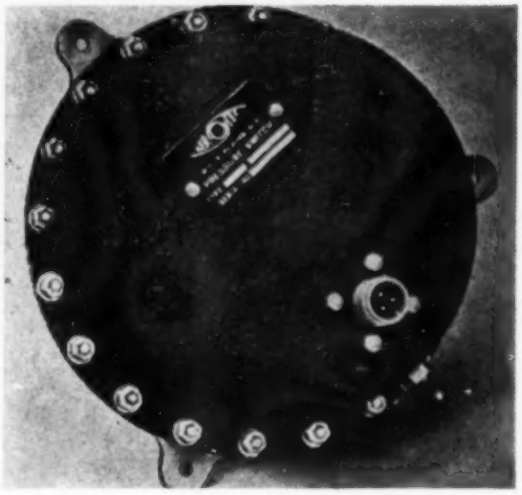
PACKAGING MACHINERY

LUDLOW • KENTUCKY

ing, the coolers may be operated with Niagara "No Frost" liquid solution.

The range of capacities in different sizes runs from 4.7 to 137 tons refrigeration. The model rated at 137 tons is 105" long by 88" high by 60" wide. Water deliveries range from 11 to 220 gallons per minute.

The company's experience with this type of equipment has resulted in many features of convenience and ease of maintenance. All parts are accessible for cleaning and experience shows that coils stay clean indefinitely regardless of water source if the tank is cleaned weekly. Tank is ample in size. Special provision is made for the application of insulating materials. The equipment is manufactured by the Niagara Blower Co., 6 E. 45th St., New York 17.



Bump Pump

Adaptable for handling thin liquids or water up to 500 lbs. pressure and viscous liquids and oils to 1,000 lbs. pressure is this new low capacity high pressure pump, announced by the Bump Pump Company, La Crosse, Wisconsin. The flow is constant regardless of the pressure, and it will operate on vacuum as high as 27 inches. Designed so that the impellers can be changed to handle any capacity from 60 gal. per hour up to 480 gal. per hour, this pump is furnished in standard foot mounted model, to be driven directly by standard speed motor, 1,200-1,800 R.P.M., and can be furnished for either side intake and discharge, or intake and discharge on the face plate.

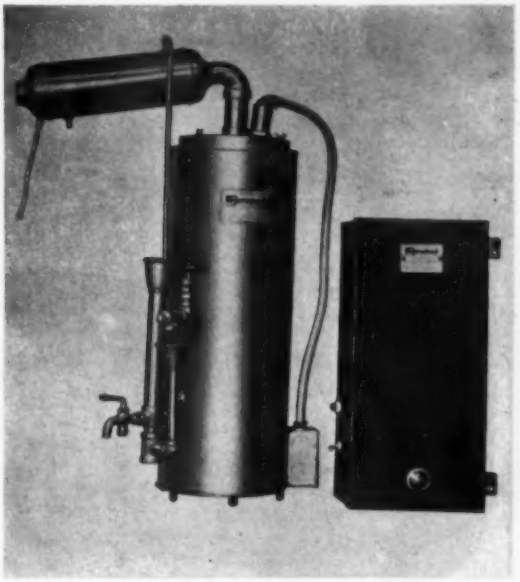
It is made with mechanical seals, but can be furnished with the conventional type packing. Standard models have standard bronze sleeve bearings, or ball bearings throughout—or ball bearings and by-pass with pressure relief valves. The pump can be mounted in any position, as the bearings will support either vertical or horizontal mountings. It is made of any suitable metal, cast iron, bronze, stainless steel, etc.

A Sensitive Diaphragm Pressure Switch

Originally designed to control automatically the intercooler flap on fighter planes, this exceptionally sensitive diaphragm pressure switch is now available for other applications.

Specifications received from the Aerotec Co. of White Plains, N. Y., show a sensitivity of 1/100 of an inch of water on stationary applications.

This instrument may be adjusted by means of two knobs to any pressure value desired. For accurately determining these pressures, a draft gauge may be connected in parallel with the pressure switch.



New Low Water Cut-Off

The Barnstead Still & Sterilizer Co., Inc., announce a new floatless low water cut-off for users of their electrically-heated water stills. The cut-off automatically shuts off the electricity if water level in evaporator drops below proper operating level. An important feature of the new cut-off is the remote control cabinet which may be mounted in any convenient place regardless of the still location. This makes it easy to start and stop still and to reset the cut-off. The device operates on alternating current and may be installed on stills now in operation.

There are no moving parts inside the still and no float-chamber is employed. This cut-off is positive in action and requires no maintenance. It operates on a weak current flowing through an electrode rod into the water in the evaporator. When the water drops below the end of the rod the current is broken and a magnetic switch operates to shut off the electricity.

The remote control cabinet houses the relay and magnetic switch, starting switch, reset button, and has a convenient pilot light on the cover to indicate when still is running. Requires only simple electrical connection to the still.

Floatless cut-offs for gas-heated stills are also available.

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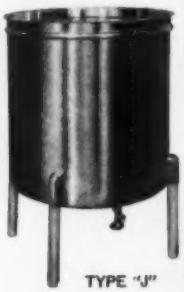

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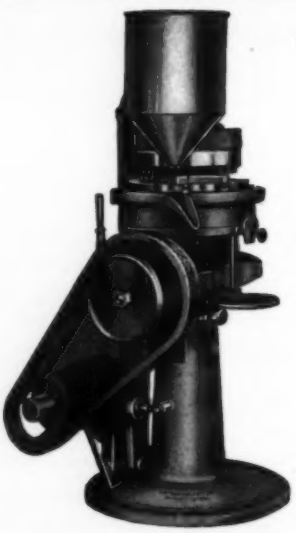

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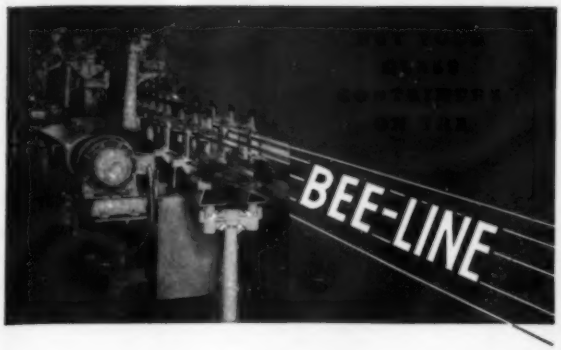

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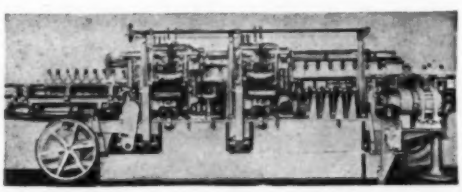

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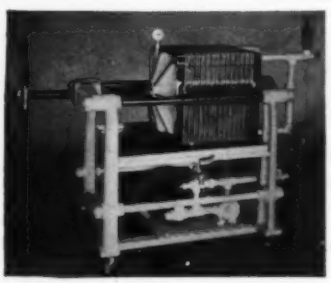

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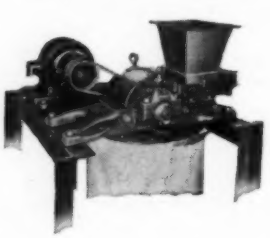

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Arginine Deficiency As Cause of Male Sterility

According to an item in the October 1944 issue of *Modern Medicine*, reports of sterility in underfed French prisoners held by the Nazis are corroborated by experiments conducted at the Johns Hopkins Medical School. One of the critical factors in fertility is arginine, the amino acid that makes up four-fifths of the human spermatozoon. When healthy young men were fed an arginine-free diet, the number and motility of the spermatozoon in the semen were greatly reduced. Although the condition was reversible, it is possible that porlonged arginine deprivation would cause permanent sterility. Testicular functions of human subjects were impaired when deprived of arginine for even a short time.

It is also noted atrophy of the sex glands occurred when rats were deprived of tryptophane, another essential amino acid. In addition, the animals suffered from cataracts, defects of tooth enamel and loss of fur.

Treating Tropical Ulcers

In the Bombay Presidency, the frequency of cases of chronic ulcer of the skin and underlying tissues resulted in extensive investigations into the causes and treatment of these conditions. The report of these studies (*Indian Med. Gaz.* 80: 128, 1945, through *Pharm. J.* 155:99, 1945) states that the most satisfactory treatment was as follows: Clean the ulcer with weak phenylmercuric nitrate solution and apply a water-in-oil emulsion consisting of:

Sulfathiazole	12.0
Calcium oleate	2.0
Beeswax	3.0
Cod liver oil	60.0
Water	40.0

The ingredients are sterilized separately and worked into a paste under aseptic conditions. Sulfanilamide-impregnated dressings were then applied on top. In some instances, 10 per cent sulfanilamide paste in vitaminized oil was used with satisfactory results.

Quinine Rates Higher Than Synthetics

In the opinion of the (British) Colonial Products Research Council, whose report is abstrated in the *Manufacturing Chemist* (16:318, 1945), quinine is still better than anti-malarial synthetics. Despite the value of synthetics for combatting malaria, quinine remains of outstanding importance as "the easiest and safest drug to use without close and constant medical supervision." Plans have been proposed for research and development work on the growing of cinchona, source of quinine, in the Colonial Empire, based upon East Africa.

Bacitracin—A New Antibiotic

A new antibiotic, called "bacitracin," has been recovered from a strain of the Bacillus subtilis group of organisms by B. A. Johnson, H. Anker and F. L. Meleny (*Science* 102:376, 1945). Given this name because the original, particularly active strain of organism was obtained from the wound of a patient named Tracy, bacitracin is neutral, water-soluble and relatively heat stable. No acute or delayed symptoms of toxicity have appeared when the relatively impure material, concentrated by butanol extraction, has been repeatedly injected into laboratory animals by the subcutaneous, intraperitoneal or intravenous routes. No sign of local irritation has been noted when such preparations were injected subcutaneously into human volunteers or when applied locally to human infections or on the human conjunctiva.

In vitro, bacitracin is active chiefly against Gram-positive organisms, but the gonnococcus and meningococcus are susceptible to its action. It is also active *in vivo* against experimentally produced streptococcal infections in mice and against gas gangrene infections in guinea pigs. Clinical uses, so far limited to local treatment, in hemolytic streptococcal and staphylococcal infections in man have given encouraging results. Attempts are going forward to produce this antibiotic by large-scale commercial methods to permit testing of its systemic effects.

Vitamin K and Infant Mortality

Studies made by W. W. Waddell and B. W. Whitehead (*Southern Med. J.* 38:349, 1945) show that well over 4,000 infants born in one large hospital have received vitamin K in prophylactic doses and that hemorrhagic disease has disappeared from the nurseries. Previous to the routine use of vitamin K, the incidence of hemorrhagic disease of the newborn was 0.3 per cent, a figure generally stated as the usual incidence of this syndrome. Since the routine use of the vitamin was begun, the hospital attendants have not had to give one transfusion because of bleeding or to replace extensive losses of blood caused by frank hemorrhage. In addition, the incidence of intracranial hemorrhage initiated by birth trauma has been materially reduced. It is pointed out that vitamin K circulating in the infant's blood stream requires at least one hour to build up prothrombin. In view of that important fact it is, of course, desirable to treat mothers at least an hour before delivery.

Penicillin By Mouth

It is recognized that in order to avoid inactivation when given by mouth, penicillin must escape the destructive influence of gastric acidity. A number of methods to overcome this problem have been devised by various workers. To this number may be added the procedure developed by S. Ross, F. G. Burke and P. B. McLendon (*J.A.M.A.* 129:327, 1945), in which the penicillin is dispensed in specially prepared capsules together with preliminary neutralization of gastric acidity. In their method, the contents of an ampule containing 100,000 units of powdered sodium penicillin was transferred to a plain gelatin capsule (No. 1), which was moistened and sealed and in turn placed in a second capsule of the next larger size (No. 0). Hardening of the capsule containing the penicillin was then accomplished by placing it in solution of formaldehyde U. S. P. diluted 1:20 for five seconds, followed by immersion in 95 per cent alcohol for five minutes. The pur-

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pose of the double capsule was to provide additional mechanical protection for the penicillin in its passage through the stomach. Two aluminum hydroxide tablets were given one-half hour prior to the ingestion of each penicillin capsule in order to neutralize the hydrochloric acid in the stomach.

A clinical trial of this method on 10 children with gonorrhea, 2 with pneumonia and 2 with cellulitis resulted in prompt recovery. It was found that the administration of a 100,000 unit capsule every three hours by this method provides constant therapeutic penicillin levels well within or above the effective antibacterial range of most susceptible organisms throughout the course of treatment. Moreover, the relatively large doses of penicillin employed produced no toxic manifestations.

Of pertinent interest in this connection are the comparisons made by P. A. Bunn and his associates (*J.A.M.A.* 129:320, 1945) with regard to various methods of giving penicillin by mouth for the treatment of pneumococcic pneumonia. They found that the therapeutic results obtained following the use of powdered penicillin dissolved in water or enclosed in capsules were as good as were observed after the administration of penicillin suspended in oil.

Also noteworthy are the observations reported by M. Finland, M. Meads and E. M. Ory, in the same publication (*J.A.M.A.* 129:315, 1945). They noted that the serum levels obtained with ordinary penicillin in saline solution were at least as high and as well sustained as with any of the special oral preparations tested. This was true both before and after meals except possibly when aluminum hydroxide gel was used in addition to the saline solution of penicillin after a meal.

Vitamins and Surgery

Giving consideration to the role of vitamins for improving the "poor risk" surgical patient, W. D. Andrus and W. A. Barnes (*Surg. Clin. No. America* 25:350, 1945) note that vitamins are no longer considered as substances that are useful only in the prevention of relatively unusual conditions such as scurvy, beriberi and pellagra, but as elements necessary for basic normal biochemical changes in the body. It is often only when some complication such as poor healing of a wound, unexplained hemorrhage, or "toxic psychosis" occurs that consideration is given to a possible vitamin deficiency. For many days in the preoperative and postoperative period, the "poor risk" patient may receive no feedings by mouth or only an inadequate diet. During this period parenterally-given glucose solutions may be associated with the picture of acute thiamine deficiency. It is established that vitamin C deficiency may delay wound healing. The "poor risk" patient should receive ascorbic acid daily in large doses for ten days before surgery, as well as thiamine and vitamin K in adequate dosage.

Aspirin and Post-Tonsillectomy Bleeding

In the *Archives of Otolaryngology* (42:19, 1945), R. Singer observes that hemorrhages that occur on the sixth or seventh day after tonsillectomy are much less frequent in the clinics and hospitals of central Europe than they are here. A comparison in the preoperative and postoperative regimens used in this country and abroad revealed only one significant difference. This was the administration in this country of acetylsalicylic acid to relieve postoperative pain. In central Europe, aspirin is never used as a postoperative analgesic; aminopyrine is used instead. A post operative regimen free of acetylsalicylic acid in a series of 75 cases resulted in the conspicuous absence of hemorrhagic inflammation and of secondary hemorrhage in all instances. A plausible explanation for the occurrence of post-tonsillectomy hemorrhage seems to lie in the prothrombin lowering effect of salicylates.

Gelatin Solutions as Plasma Substitutes

In evaluating gelatin solutions as plasma substitutes, F. Steigmann and his collaborators (*Am. J. Clin. Path.* 15:223, 1945) studied the effects of administering gelatin solutions in different strengths and different admixtures to 82 hospital controls. In this study, particular emphasis was made with regard to such factors as: (1) hemodilution following one or more infusions, (2) changes in the blood, (3) liver and kidney function and (4) toxic reactions. The gelatin used in this study was supplied ready for use in solutions of 5 per cent and 2.5 per cent gelatin in isotonic solution of sodium chloride, 5 per cent gelatin in dextrose and 5 per cent gelatin in isotonic solution of sodium chloride reinforced with tryptophan, tyrosine, methionine and leucine. The gelatin solution was prepared from calcium gelatinate. All infusions were given intravenously. Amounts from 2,000 to 10,000 cc. were tolerated without ill effects. Thrombosis of and pain in veins into which gelatin is repeatedly given were not uncommon. Some reactions were obviated by boiling all rubber tubing after infusion in alkaline solution. No untoward results following the administration of gelatin solution were observed in regard to the liver, kidney or hemopoietic system except for an increase in the sedimentation rate of red blood cells. The fact that gelatin is nonantigenic makes this substance promising as a plasma substitute.

Benzyl Ester of Penicillin

Various types of esters of penicillin have been developed in attempts to improve the characteristics of this antibiotic. Few were found to hold great promise. However, C. J. Cavallito and his associates (Science 102:150, 1945) have discovered that the benzyl ester may be extremely valuable because of its ease of preparation, enhanced stability, ready oral absorption and powerful chemotherapeutic action. In contrast to penicillin salts, benzyl penicillin is stable at temperatures above 100° C. Obtained as a colorless, hard glassy solid, the ester is also much more stable in alcoholic solvents than any known penicillin salt. It is approximately 2.5 per cent soluble in sesame oil or propylene glycol.

Experimental work indicates that when injected subcutaneously in mice, benzyl penicillin is at least three times as potent as ordinary sodium penicillin in aqueous solution or suspended in oil. When taken by mouth, the benzyl penicillin is less active than by injection, but still is sufficiently potent to make it substantially as effective as an equivalent weight of sodium penicillin given by subcutaneous injection. The potential advantages of these properties are self-evident and the clinical findings, awaiting publication, should be most interesting.

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This Spermaceti should not be confused with inferior hydrogenated sperm oils which are sometimes offered as Spermaceti The Plymouth Brand is the finest which can be produced and is produced from Genuine Sperm Oil by the cold pressing method. It is a very white crystalline wax containing no free oil, has a very low Iodine number and is free of any offensive odors.

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Compounder's Corner

Aluminum Hydroxide Gel

The need arising for considerable quantities of aluminum hydroxide gel, extensively used in treating gastric disorders, A. R. Whittingham (Pharm. J. *154;278, 1945*) *decided to prepare the material from ammonia alum and sodium carbonate crystals, both of which were available in sufficient quantities. After reviewing the theoretical considerations; a 6 per cent product being the goal, the following method was evolved:*

Seventy ounces of sodium carbonate is dissolved in two gallons of hot water and strained through fine linen into a cask of approximately 40 gallons capacity. Fifty-six ounces of ammonia alum is dissolved in one gallon of hot water and slowly strained into this solution with constant stirring. It is essential to run the alum into the sodium carbonate to ensure keeping the carbonate in excess throughout. A further two gallons of hot water are added and the whole stirred briskly to promote complete evolution of gas. Some ammonia is evolved due to excess carbonate. To reduce possible adsorption to a minimum the cask is immediately filled with cold water. The precipitate is allowed to settle for about twenty-four hours and the supernatant liquid siphoned off as completely as possible. The precipitate (volume about 4 gallons) is collected in a fine linen bag of about 4 gallons capacity. It is washed in the bag until the washings are free from sulfate (6-7 washings). The volume is allowed to concentrate to slightly less than one gallon, 0.1 per cent sodium benzoate and 0.01 per cent oil of peppermint is added and the volume made up to one gallon.

DDT Delousing Preparations

In a review of the uses of DDT, the up-and-coming insecticide, appearing in the *Journal of the American Pharmaceutical Association*, Practical Pharmacy Edition (6:260, 1945), it is reported that Army's delousing spray, containing both benzyl benzoate and DDT, has a quick action that is both lousicidal and ovicidal. As recommended by the Office of the Surgeon General, about two-thirds of an ounce is required per person. A both should not be taken for at least twenty-four hours after application of the spray to the body. When applying to the scalp, the eyes must be protected. For head lice, not more than 0.5 ounce is usually needed for complete deinfestation.

The stock solution for making the requisite delousing spray for humans consists of:

DDT, technical grade	**6.0 per cent**
Benzyl benzoate	**68.0 " "**
Benzocaine	**12.0 " "**
Wetting agent	**14.0 " "**

This is diluted with 5 parts of water by volume and used within 24 hours.

Two Army uses for a 10 per cent DDT powder may also be adopted for civilian use. For head lice the powder is dusted lightly into the hair and rubbed in with the fingertips. For crab lice apply the powder thoroughly to all regions of the body having a moderate growth of hair. Do not bathe for at least twenty-four hours. Repeat the application after one and two weeks. The DDT powder does not have ovicidal properties.

The powder may be made as follows:

DDT, technical grade	**10.0 per cent**
Pyrophyllite	**90.0 " "**

It is reported that milling the DDT with diluents prevents some difficulties. In addition to the above base, a variety of talcs, clays and soapstone have been used.

Preventing Athlete's Foot

The infection known as "athlete's foot," dermatophytosis, epidermophytosis and so forth, but probably better designated as tenia pedis, is the most frequent of all fungus infections, according to J. G. Downing and N. F. Conant (New England J. Med. *233:153, 1945*) *in their comprehensive review on mycotic infections. That there is no specific method of treating cases of tinea pedis has been clearly demonstrated by appeals from the Army and Navy medical services for help in combating this type of infection. Despite considerable work and the introduction of new drugs, no standard method of treatment has resulted.*

Recurrence of infection may result from previous inadequate treatment or from reinoculation through contaminated contacts. Prevention must include a search for remaining foci of infection and adequate instruction and means for avoiding contacts. Dusting powders employed as prophylactics and aslo as drying agents are beneficial. A dusting powder, such as the following, should be used in the shoes and socks and dusted on the feet:

Salicylic acid	**2.0 per cent**
Zinc stearate	**3.0 " "**
Boric acid	**6.0 " "**
Starch	**10.0 " "**
Powdered talc	**79.0 " "**

Also, the feet may be painted once or twice a week with a sodium propionate lotion, containing 8.2 per cent sodium propionate, 1.2 per cent propionic acid and 10.0 per cent N-propyl alcohol. The feet should be kept clean, clean socks worn every day, and if excessive perspiration is serious, a drying agent, like aluminum acetate, should be used occasionally.

Sulfa Ointment Studies

In studies on the factors affecting the *in vitro* activity of sulfonamide ointments, D. F. Aldrich and H. G. De Kay (*J.A.Ph.A.* 34:17, 1945) tested a number of bases for their ability to act as carriers for the sulfa drugs. Of the bases tested, the ointment showing the greatest degree of bacteriostatic power was contained in an emulsion base with the following formula:

Glyceryl monostearate	**6.3 Gm.**
Liquid petrolatum	**3.2 cc.**
Lanolin	**12.6 Gm.**
Water, *q. s.* to make	**60.0 Gm.**

These laboratory investigations provided other valuable data. Thus, sulfathiazole, sodium sulfathiazole, sulfanilamide and sulfadiazine were shown to have good bacteriostatic activity upon the *S. aureus* organism, with sodium sulfathiazole showing greatest activity. The optimum concentration of the drug appears to be between 5.0 per cent and 7.5 per cent. Optimum *p*H values for ointments of sulfathiazole, sulfanilamide and sulfadiazine

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were shown to be around *p*H 9.0. For sodium sulfathiazole, the optimum *p*H value in an ointment was observed to be around 10.0. The presence of water in a sulfa drug ointment seems desirable for greater bacteriostatic activity. A water content of at least 50 per cent is recommended for optimum activity.

It was also noted that the addition of surface tension reductants (e.g. Duponal WA and Aerosol OT) to sulfa ointments improves the penetration power as shown by the increase in the zone of inhibition, particularly in the case of sodium sulfathiazole. A concentration of the surface tension reductant of 0.5 per cent was observed to have beneficial effects.

Foam Baths

The foam bath preparations described in U. S. Patent 2,382,732, granted to L. Lowenstein, takes advantage of the reaction occurring between crystallized aluminum sulfate and sodium bicarbonate. A typical mixture for this purpose is given as containing:

Crystallized aluminum sulfate	**1,718 Gm.**
Sodium bicarbonate	**1,300 Gm.**
Aluminum oxide (in fine powder)	**195 Gm.**
Saponin	**30 Gm.**

The mixture is used in the proportion of 373 Gm. to 30 gallons of warm water. Since the patent is now vested in the Alien Property Custodian, the product is available to manufacturers under Government license.

Medicated Dusting Powders

Presenting a review of modern applications of medicated dusting powders, S. J. Hopkins (*Retail Chemist* 16:16, Aug. 1945) states that such powders are usually formulated with a base that is partly protective, partly absorbent in action, and contain relatively low proportions of the therapeutic substances. These powders have some relationships to cosmetic face powders, and both types have several fundamental characteristics in common. Amongst other criteria, the following are of considerable importance, and well-made dusting powders should possess: (a) Good covering power, (b) Relatively prolonged effect, (c) Good adherence to the skin, and, (c) Even distribution. In considering the bases of such products, it is pointed out that starch was, and to a considerable extent still is, a widely used base. Applied to moist or eczematous surfaces, it absorbs secretions and exudates, and helps to make the injured surfaces less liable to bacterial invasion.

Talc is a useful ingredient in a powder base, and has wide applications. The proportion used should be chosen with due regard to the other constituents, as otherwise the finished product will be lacking in adhesion. Kieselguhr, specially purified, is an excellent medium for the preparation of medicated powders, and has some advantages over the more usual inorganic bases. These include an improved adhesion to the skin, greater power of absorption, and an increased dispersion of the medicament.

The use of chalk as a powder base is also to be recommended. Ordinary precipitated chalk is practically useless for the purpose, but modern precipitated chalks specially prepared for this work, are excellent. They are light and easily distributed, have good covering power, and are of standard composition.

Other useful bases are the special grades of kaolin, bentonite, and amorphous silica. This latter material increases the lightness and fluffiness of powders, and the addition of 10-15 per cent to a heavy powder will often give it the necessary buoyancy and softness.

In considering the therapeutic constituents, Hopkins states that boric acid is the most frequent constituent of mild antiseptic powders. Soft, smooth and absorbent, it has bacteriostatic properties, arresting the process of decay, and is cooling and deodorant.

Zinc oxide is a useful astringent, and is valuable for application to mildly inflamed surfaces. Zinc peroxide is similar, but is a more powerful antiseptic, decomposing slowly into zinc oxide and oxygen. It inhibits the growth of anaerobic bacilli, and inactivates their toxic products. It has some value in relieving painful ulcers, and stimulates the growth of new granulating tissue.

Dusting powders and foot powders are widely used for the treatment and alleviation of excessive perspiration. These usually contain some astringent such as zinc oxide or an aluminum salt to lessen the perspiration, with a base of marked absorbtive power. Another and more scientific approach to the problem is the use of a dusting powder containing hexamine. Hexamine, as is well known, is a stable substance under ordinary conditions but in acid solution it breaks down slowly with the liberation of formaldehyde. When applied to the skin, either in solution or included in a dusting powder, the acid of the perspiration is sufficient to initiate the release of formaldehyde, which then inhibits any further prespiration. The breakdown of the hexamines thus automatically stopped, and it does not restart until the inhibitory effects of the formaldehyde have worn off. Paraformaldehyde also has applications in this connection, and the following is a typical formula for a foot powder:

Paraformaldehyde	**6.0 per cent**
Boric acid	**10.0 " "**
Kaolin	**25.0 " "**
Kieselguhr, to make	**100.0 " "**

From time to time, demands are made for the inclusion of more powerful antiseptic medicaments. Zinc peroxide is often used and it may be employed in conjunction with sulfathiazole, as in a simple mixture containing 10 per cent zinc peroxide and 90 per cent sulfathiazole, or diluted with boric acid as follows:

Sulfathiazole	**5.0 per cent**
Zinc peroxide	**20.0 " "**
Boric acid, to make	**100.0 " "**

Several sulfanilamides have been tried out as dusting powders, but their use has not always been followed by spectacular results. When mixed with substances of more immediate activity, however, potentiation occurs between them, and the mixture is frequently more powerful than either alone. Sulfathiazole with 1 per cent of proflavine sulfate is an example of this type of powder, and it has wide applications in the prevention and treatment of wound infections. Such preparations should be used with care, as some irritation has been reported following the use of flavine compounds of this kind. As indicated by Fleming, the possibility of incorporating penicillin in dusting powders has not been overlooked. At present, dusting powders of penicillin are simple dilutions of the drug, prepared aseptically, in a sterilized sulfonamide compound, usually sulfathiazole.

Booklet on Isopropyl Alcohol

A new edition of the booklet covering the properties and uses of Petrohol, a brand of isopropyl alcohol, has been issued by the Standard Alcohol Company, 26 Broadway, New York 4, N. Y. The new edition contains much valuable information on isopropyl alcohol, including data on specifications, uses, chemical behavior, pharmacology, physical properties, analytic methods and a number of useful tables and charts.

(Continued on page 878)

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Perfumer's Shelf

Acetals in Perfumery

Two articles appear in a recent issue of *Soap, Perfumery and Cosmetics*, which when taken together, present a quite comprehensive review of the preparation, structure and employment of the acetals—important materials in perfumery.

In one of these articles, a pre-war survey prepared by G. Igolen (*S.P.C.* 18:486, 1945), it is pointed out that among the innumerable aromatic compounds utilized in the perfumery industry, the aldehydes are certainly the most important class from the points of view of number, strength, and variety of odor. Unfortunately, despite the brilliant qualities due to their characteristic osmophoric grouping, the aldehydes are in general very fragile, for the -CHO radicle is particularly sensitive to the action of air and alkalis. For this reason the pre-occupation of a great number of workers has been, while attempting to preserve the original odor, to protect the generative function. The only practical means for this protection is the transformation of the aldehydes into acetals. The ordinary acetals usually have odors resembling those of the aldehydes at the start, but these odors are somewhat weaker, with a prevailing note of "verdure." A certain number of these have been employed for a long time in the perfumery trade, such as the acetals of the fatty series, acetals of phenylacetic aldehyde, of hydratropic aldehyde, of hydroxycitronellal, etc. The cyclic acetals and the cyclic acetal carbinols, which have been much more recently employed, have various new odors. As a rule, they are quite tenacious, and prove a valuable contribution to the perfumery trade.

Elaborating on the desirable qualities of the acetals, R. W. Moncrieff (*S.P.C.* 18:454, 1945) remarks that, while the odor of these compounds is generally not as strong as the aldehydes from which they are derived, they do possess certain advantages over their parent substances. In his opinion, acetals have the following advantages over aldehydes:

(1) They are higher boiling and do not evaporate so quickly, so that their perfume is more persistent. Acetaldehyde, for example, boils at 20°C., but its diethyl acetal boils at 104°C.

(2) They are less prone to atmospheric oxidation than aldehydes, which pick up oxygen quickly to form acids, which lack the aldehyde odors.

(3) They are less subject to polymerization than the aldehydes. Polymerization is necessarily accompanied by increasing molecular weight, and as the molecular weight increases odor falls off. Acetaldehyde, for example, readily polymerizes, but its diethyl acetal is stable.

According to Moncreiff, the standard method of preparing acetals is that of Fischer and Giebe. It consists of passing about 1 per cent by weight of dry hydrochloric acid gas into a mixture of the aldehyde and alcohol, heating and allowing to stand. The acid is removed by adding potassium carbonate and the acetal separated by fractional distillation. However, other workers have shown that the yield could be increased if the hydrochloric acid was neutralized with sodium ethoxide before extracting the acetal. The yield of the diethyl acetal of benzaldehyde was in this way raised from 35 to 80 per cent.

Lactones in Perfumery

In a comprehensive review of the chemistry and properties of the lactones, which are internal anhydrides of hydroxy acids, R. W. Moncrieff (*S.P.C.* 18:622, 1945) presents the following concise summary of the advantages that the lactones, as a class, offer to the perfumer: (A) Some of them have delightful and powerful odors. Peach lactone and coumarin come promptly to mind in this respect. (B) As a class they are chemically stable and not subject to serious decomposition on exposure to air. (C) As a rule, they have high boiling points and are not too evanescent. If incorporated in a perfume, their odor persists. (D) In many cases they are readily prepared. This, of course, usually depends on whether the parent hydroxy acid is obtainable from cheap and abundant materials. (E) Some of the newly discovered lactones have fine musk odors and some have excellent fixative value. (F) They are readily soluble, particularly in alcohol, and even as a rule in aclohol-water mixtures.

When it is recalled, notes Moncrieff, that the lactones are internal esters, it is not surprising that they share with the esters the possession of pleasant, agreeable and fragrant odors. In respect to stability and persistence they are probably superior to the esters by virtue of their cyclic structure which generally confers increased stability.

New Sources of Eucalyptus Oil

The probability of a new source of oil of eucalyptus in Australia is indicated in a letter written to the *Australian Journal of Science*, according to an item in the *Pharmaceutical Journal* (155:5, 1945). In this letter, E. M. Watson reported that samples of oil obtained from *Eucalyptus Kochii* Maiden *et* Blakely complied with the B.P. requirements for eucalyptus oil. The specimens examined came from plants in different stages of growth and consisted almost entirely of cineole, the proportion of which, determined by the *o*-cresol method on the crude oil, ranged from 85 to 92 per cent. The distribution of the species is not known, but may be presumed to be reasonably extensive.

Kannauj Essential Oil Industry

From time to time interesting reports have appeared on essential oil production in India. Recently, in the *Perfumery and Essential Oil Record* (36:164, 1945) there was published a description of the Kannauj essential oil industry. The city is said to be flooded with distilleries, some of which are of long standing reputation and experience. Using quite crude equipment, these distill flowers to obtain a variety of products like perfumed waters, ottos, itrs of various grades, hair oils, etc.

The perfumed waters are prepared only from roses and keora flowers. The weight for weight distillate is known as ek mana, in which one maund of flowers are distilled to collect one maund of the water. But the method of obtaining concentrated grades is different from that used in Bulgaria. In Bulgaria a large quantity of the weight for weight distillate is redistilled to collect one-eighth the quantity. The Kannauj distillers, however, concentrate their product by re-distilling the first weight for weight distillate with fresh lots of one

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A few basic odors comprise the most popular Spring scents. Lilac, lily-of-the-valley, gardenia and innumerable variations of these florals consistently lead the parade of Spring perfumes year after year. You may name them what you will, but m'lady instinctively knows her scents and she'll choose one of these 'most every time.

OUR OFFER TO YOU . . .

As a suggestion to established perfumers seriously interested in original creations for Spring merchandising, we invite you to let us prepare and submit samples of *finished* extracts, colognes, creams, toilet waters or powders (or any other desired product), built around one or more of our exquisite lilac, lily-of-the-valley or gardenia specialties. With slight modification, these compositions can be made delightfully individual. Simply address us on your letterhead, specifying the type of odor and product you want. We'll then submit a finished sample, perfumed for your candid appraisal and, we hope, your hearty approval.

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PERFUMERS who have shunned the aid of outsid experience—who have preferred, in the past, to go-i alone in the solution of their problems—may find tha lone effort is now an outmoded method of approach The lesson of "harnessed atomic power", brought t dramatic reality solely and deliberately through th planned and coordinated efforts of *many* trained minds will not be ignored or forgotten in the months an years to come. Instead, individuals and organization whose reliance has been upon one-man effort hereto fore, may now be faced with the inescapable competi tive fact that *two heads ARE better than one!*

← ← ← ← ← PLEASE UNFOLD THE PAG

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ENJOYING a demand far in excess of anything previously experienced, the manufacture and sale o powders is still soaring. Easy to make and easy t pack, the one great problem with dusting and talcum powders is to obtain an odor that will *last* . . . particu larly in paper containers. The four, moderately priced long-lasting perfumes featured on the following pag were specially developed to overcome this difficulty You'll find them ideal for this type of work.

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FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

maund flowers as many times as desired. The resulting distillates are called Do Mana (double distilled), Teen Mana (triple distilled), and so on, according to the number of distillations carried out.

Otto is the absolute essences of the flowers which floats on the top of the perfumed water and is carefully skimmed off. This is known in vernacular as ruh. Itrs should not be confused with ottos. They are obtained by absorbing the perfume in sandalwood oil, or white (odorless) paraffin oil, etc. Itrs based on sandalwood oil are superior grades. The inferior grades are based on mineral oils. The grading depends also on the quantity of flowers distilled per charge of absorbent, i.e., on the perfume strength of the itr.

Hair oils are obtained by a special process of enfleurage. The modification adopted lies in the fact that instead of absorbing the flower odor on a fat as in European countries, the odor is absorbed in oily seeds. The seed used is generally til (or sesamum or gingelly). A layer of seed is spread on the floor of a cemented pit, a layer of fresh flowers is spread on that, and thus alternate layers of seeds and flowers are piled up till the pit is full, when it is covered. The flowers are taken out after 24 hours contact and fresh flowers are spread out on the next day, the process being repeated for a month or two with the same lot of seeds. At the end, the seeds are crushed in a country ghanni and the extracted oil is sold as rogan or hair oil. Rose, jasmin and keora are the flowers generally used in this process.

Some Basic Methods for Developing New Perfume Specialties

As everyone knows, war conditions have caused a shortage in many essential oils and, in turn, have tremendously accelerated research and the development of new specialties. One of the most notable examples is that of lavender. During the war many synthetic lavenders have been developed due to the lack of pure French oil of lavender fleurs. The aromatic chemist, in order to improvise an odor similar to oil of lavender fleurs has fractionated oil of lavender aspic, isolating therefrom certain fractions which are free from the camphoraceous odor of spike but resembling to a marked degree lavender fleurs. These selected fractions have then been combined with other materials to produce an artificial lavender fleurs, and these products have been excellent substitutes for the manufacturer of cosmetics.

The natural essential oils are one of the most prolific sources for the development of new specialties. One method frequently used in former years was the distillation of essential oils over certain products such as sandalwood sur roses or petit grain sur orange flowers. The distillation of these oils over such products changes and softens the odor characteristic of each product, thereby giving an unusual odor character that would not be present in a simple mixture of the two oils. From many essential oils there are derivatives such as alcohols which can be esterified, producing a product with a softer and somewhat different note than the original oil. To cite an example, oil of vetiver contains vetiverol which when esterified produces vetiver acetate, the product having a much finer and softer character than oil of vetiver.

Also derivatives from essential oils vary in odor depending upon the type of oil. For example, oil of cloves contains a large percentage of eugenol and the common eugenol used by the perfumer is a product extracted from this source. However, there are other oils which have a considerable eugenol content and when isolated have been found to have a different character which in some cases changes the odor note. The perfumer having one of these products at his disposal can then build a distinctive specialty by adding to it such products as rose and orris, thereby developing a specialty to be used in some new type of perfume.

The development of new products in the aromatic chemical field is almost limitless and, no doubt, now that the war is over, considerable research will be done in developing new aromatics. We know, for example, that taking methyl anthranilate compounded with hydroxy citronellal in the proportion of their molecular weights or even in a proportion of half and half and allowing the combination to stand for several weeks, will produce a product which becomes quite thick and has an odor differing somewhat from either hydroxy citronellal or methyl anthranilate.

There is no doubt that there are many other possibilities, even in these simple condensations, although some may require heat and fractionation, but so far the surface has only been scratched and the development of these new things in the future will assist the perfumer in making new specialties and thereby producing new perfume notes of an unusual character.

Essential Oil of Halfordia Kendack

As part of a series of studies of the essential oils of the Queensland flora, T. G. H. Jones and F. N. Lahey (*Proc. Roy. Soc. Queensland*, through, *Chem. Abstr.* 39:4432, 1945) have reported their findings with regard to the essential oil of *Halfordia Kendack*. On steam-distillation, 380 pounds of the leaves and terminal branchlets of this plant yielded 1,200 cc. of a clear, mobile liquid. Dilute sodium carbonate and sodium hydroxide solutions did not extract anything from the oil. After washing with water and drying, the oil was fractionally distilled through a Young's fractionating column at 4 mm. Ninety per cent of the oil was found to be dextro-alphapinene. It had the following physical properties:

Boiling point	**35-6°C.**
Density, at 15.5°C.	**0.862**
Index of refraction	**1.4683**
Specific rotation	**46.40**

The remainder of the oil was fractionated several times to give three head fractions. The first of these was identified as para-cymene by oxidation by nitric acid to para-toluic acid. The second head fraction, with a density of 0.9216, index of refraction of 1.4812, and a specific rotation of 20°, contained terpineol acetate. The third fraction consisted of sesquiterpene and sesquiterpene alcohol; giving the characteristic violet color on treatment with bromine vapor in the presence of acetic acid. However, only a few cc. of this fraction was available and it was not further investigated.

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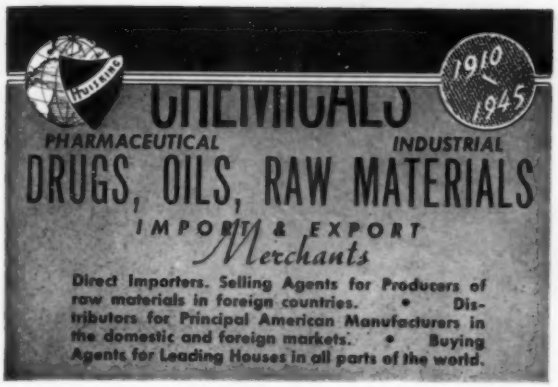
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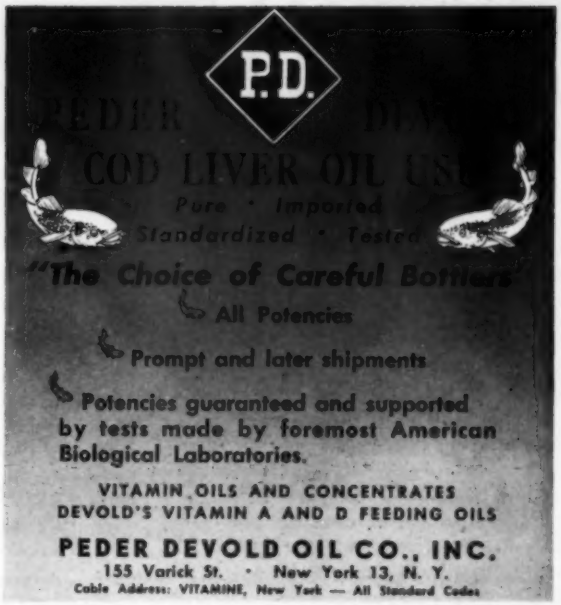
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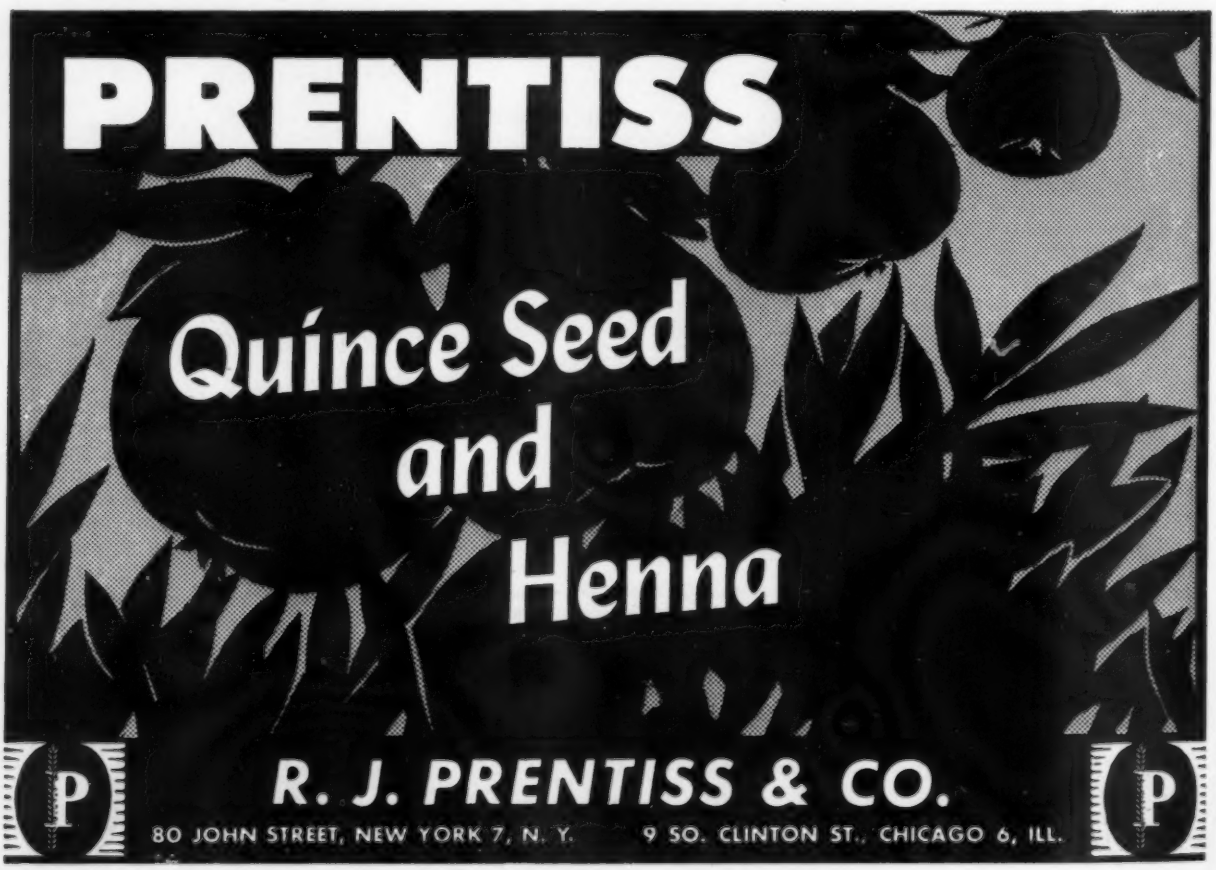

Industry's Books

Handbook Of Practical Bacteriology, by T. J. Mackie, C.B.E., M.D., Professor of Bacteriology, University of Edinburgh, and J. E. McCartney, M.D., Director of Research and Pathological Services, London County Council, Seventh Ed., 720 pp., Williams and Wilkins Co., Baltimore, $5.

The short time since the publication of the sixth edition of this work has made it possible to bring the book up-to-date in most essentials. Contents: Part I—Introductory: Chapters 1—The General Biology of Micro-organisms; II. Immunity in Relation to Practical Bacteriology. Part II—Bacteriological Technique. Chapters III. The Use of the Microscope in Bacteriology; IV. Cultivation of Micro-organisms—Preparation of Culture Media; V. Cultivation of Micro-organisms (cont.)—Use of Culture Media; VI. Staining Methods; VII. Animal Inoculation and Autopsy; Care of Laboratory Animals; VIII. Immunological and Serological Methods as Applied to Bacteriology; IX. Bacteriological Examination of Water and Milk; Testing of Antiseptics; Testing of Surgical Catgut for Sterility; Collection and Forwarding of Specimens for Bacteriological Examination. Part III—Pathogenic and Commensal Micro-oragnisms (including filterable Viruses) and Bacteriological Diagnosis. Chapters X. The Pyogenic Cocci; other pyogenic bacteria; pneumococcus; XI. Meningococcus; Commensal Gram-negative Cocci; Gonococcus; Veillonella. XII. Diphtheria Bacillus and Allied Organisms; XIII. Tubercle Bacillus and other Acid-fast Bacilli; XIV. Bacillus Mallei; Bacillus Anthr-acis and allied organisms; XV. Gram-negative aerobic bacilli occurring as commensals or pathogens in the intestine; XVI. Cholera Vibrio and allied organisms; plague bacillus and past-eurella group; XVII. Brucella Group; Haemophilic bacteria and allied organisms; XVIII. Tetanus Bacillus; other anaerobic bacilli of infected wounds; XIX. Acinomyces and allied organisms; XX. Pathogenic and Commensal Spiro-chaetes; XXI. Ricketsia group; Bartonella; XXII. Fungi; XXIII. Malaria plasmodia; Babesiae; XXIV. Filterable Viruses.

Chemistry And Physiology of the Vitamins, by H. R. Rosenberg, Sc.D., photo-offset reprint edition, 676 pp., Interscience Publishers, Inc., New York, $7.50.

Since the 1942 edition of this work has been out of print for some time, this photo-offset reprint was made to keep the book on the market until such time as a really new edition can be prepared. The reprint sells for $7.50 as compared to $12 for the original edition published in 1942. Since this book is probably the most outstanding work on the vitamins a review of its contents is justified. It begins with the presentation of a definition of the vitamins which distinguishes this group of compounds sharply from the hormones and from other essential and non-essential food constituents. A new classification for compounds which have the dual character of vitamins and structural building units or suppliers of energy is introduced. Each vitamin is then discussed separately, emphasis being laid upon the chemistry and the physiological action of these compounds. The chapters on each vitamin start with a review of the nomenclature and a tabulation of the historical development followed by a paragraph on the occurrence of the vitamin. The main discussions on the chemistry and physiology follow. Under the chemistry of each vitamin the procedures used for the isolation of the vitamin, the proof of the chemical constitution and the synthesis of the vitamin are reviewed separately. There are special paragraphs on industrial methods of preparing the vitamins and on their biogenesis. The specificity of the vitamin action is treated separately. The determination of the vitamins is subdivided into physical, chemical, biochemical and biological methods, and is followed by a paragraph on the vitamin standards. The physiology of plants and microorganisms is separated from the animal physiology which is subdivided into the metabolism of the vitamin, the physiological action and the mechanism of the vitamin action. The relation of each vitamin to other vitamins, to hormones, and to inorganics is presented in special paragraphs. Finally the vitamin requirements are briefly stated. The book ends with a list and abstracts of vitamin patents which have been issued in the United States of America, Great Britain, Germany and France.

Postwar Fiscal Requirements, by Lewis H. Kimmel, 166 pp., The Brookings Institution, Washington, $2.

The objective of this study is to estimate as accurately as possible the magnitude of federal, state, and local expenditures for the fiscal year 1949. These estimates are presented by functions for each level of government, and all governments combined, in four simple summary tables. In developing the estimates, major emphasis has been placed on the influence of government policies on the volume of expenditures. The effects of population growth, increased national income, and changing level of prices have been carefully weighed. The study should, therefore, be invaluable to everyone who has to make a living in the difficult post-war era ahead.

An Introduction To Medical Science, by William Boyd, M.D., Professor of Pathology and Bacteriology in the University of Toronto, Third Ed., Illus., 366 pp., Lea & Febiger, Phila., $3.50.

The object of this work is to offer a general introduction to the study of disease, to its causes and the bodily changes which accompany it. The first section of the book deals with the general principles of disease, the second with the diseased organs, and the third with some practical applications. The structure and function of each organ is summarized, but only those facts are mentioned which are essential to the understanding of the changes that occur in the diseased organ and the symptoms which these changes produce. A considerable number of changes have been made in this edition. A new chapter has been added on The Principles of Treatment which discusses the sulfonamide group of drugs, penicillin, immunotherapy, organotherapy, and physiotherapy in its varied forms. Amongst the new material may be mentioned the Rh factor, the relation of the sex hormone to cancer of the prostate, and disseminated sclerosis.

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READERS' QUESTIONS

THEATRICAL MAKE UP: We are very anxious to procure a formula for making a water-soluble theatrical make up of the minstrel dark and light creole type. My former suppliers have given up the manufacture of these products. Any source of information or a typical formula will be appreciated. Boston.

A modern "grease paint" along these lines can be made from:

Stearic acid	12.25
Diglycol stearate	6.12
Caustic potash	0.50
Glycerine	2.10
Water, distilled	13.34
Erythrosin, or tartrazine	0.12
Zinc oxide	6.12
Lake color, to suit	3.10
Perfume, to suit	0.75

DENTURE ADHESIVES: We are very desirous of obtaining an up-to-date formula for a denture plate adhesive powder. If you can give us any information it would be greatly appreciated. Minneapolis.

According to the latest edition of Prinz's "Dental Formulary" a standard denture plate adhesive powder can be made from:

Gum acacia, in fine powder	20 parts
Gum karaya, in fine powder	80 parts

If a more rounded product is desired, probably the following will serve:

Boric acid	5 parts
Gum tragacanth, in fine powder	70 parts
Gum acacia, in fine powder	25 parts
Vanillin	¼ part

CREAM SHAMPOO: Any suggestions you may offer in regard to the formulation of a cream shampoo (preferably one utilizing a wetting agent) will be appreciated. Detroit.

A cream shampoo can be made by reducing the water content of an ordinary liquid shampoo. Or, you can buy a ready made soap paste and adjust its consistency by adding water. A small amount of lanolin may be added to impart desirable qualities and opacify the cream. You may add a synthetic detergent, and the quantity to be added will depend on the type of detergent used. I might mention that the use of certain types of detergents are controlled by patent.

As I have indicated on previous occasions, a good grade of lather shaving cream makes an excellent cream shampoo, and very little, if any, modification is required in the formula. Such a product can be packaged in a tube or a jar. Methods for manufacturing such shaving creams have appeared in recent issues of this publication.

DDT INFORMATION: We are at present very much interested in manufacturing an insecticide having DDT as a base. We would greatly appreciate it if you can give us any information regarding the general manufacture of such an insecticide. Bogota, S.A.

Except insofar as it concerns human use (e.g. delousants, etc.) the production of insecticides is somewhat out of our line. However, you can obtain information on DDT by writing the Press Service, United States Department of Agriculture, Washington 25, D. C., and requesting release No. 1574-45.

DOG WASH: We are interested in manufacturing a shampoo for dogs which will have the following properties: maintain luster and a healthy skin, have a deodorizing and antiseptic effect and contain a substance effective against, fleas, chiggers and other parasites. Newark.

That's quite an order. However, a conventional dog shampoo which is said to maintain a healthy condition of skin and fur can be made as follows:

Soft soap	8 oz.
Glycerine	2½ oz.
Alcohol	2 oz.
Phenol	⅜ oz.
Eucalpytus oil	¼ oz.
Water, to make	35 oz.

Action against insects may perhaps be imparted by including a small proportion of pyrethrins or rotenone.

DEPILATORY POWDER: I have been experimenting with a depilatory powder containing barium sulfide and somehow or other I do not seem to be able to get the right proportions for a satisfactory product. Perhaps you can give me a standard formula from which I might start as a basis. Brooklyn.

A standard depilatory powder can be made along the following lines:

Titanium dioxide	23.0
Barium sulfide	35.0
Wheat starch	40.0
Menthol	0.2
Perfume	1.8

Dissolve the menthol in the perfume oil; rub it up with a little of the starch. Sift the titanium dioxide and barium sulfide into the mixer. Mix and sift in the remainder of the starch, then sift in the menthol-perfume mixture. Mix the entire batch for about half an hour and then fill containers.

The earth has grown old with its burden of woe,
But at Christmas it always is young.
The heart of the jewel burns lustrous and clear,
And its soul, full of music, breaks forth on the air
When the song of the angels is sung.

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ANTI-PERSPIRANTS: I am seriously interested in marketing a line of anti-perspirant products. I have seen items of this type described from time to time in your publication, but unfortunately I do not file my copies and have no way of checking back. Could you give me what you consider a representative formula for a liquid anti-perspirant and a cream anti-perspirant, this last preferably in the vanishing cream type? Los Angeles.

A very comprehensive discussion on anti-perspirants appeared in our June 1944 issue. In this discussion appeared the following formula for a liquid anti-perspirant as follows:

Aluminum chloride	**130**
Urea	**30**
Distilled water	**840**

A vanishing cream type anti-perspirant was described as consisting of:

Acid-stable glyceryl monostearate	**170**
Spermaceti	**90**
Glycerine	**39**
Distilled water	**380**
Preservative	**1**
Aluminum sulfate	**150**
Distilled water	**150**
Titanium dioxide	**20**

CAKE POWDER: I would appreciate it very much if you will be kind enough to provide a stick or cake powder formula. Pittsburgh.

I would suggest that you try the following on an experimental basis:

Zinc oxide	**24.0**
Precipitated chalk	**30.0**
Talc	**18.0**
Petrolatum	**3.0**
Boro-glycerine mixture	**24.0**
Perfume	**1.0**

Boro-glycerine is made as follows: Thirty parts of boric acid are dissolved in seventy parts of glycerine. Add to the boro-glycerine the mixed dry materials and then the petrolatum. Finally, add the perfume and mix until smooth.

ROLLING LOTION: Could you suggest a possible formula for a "rolling type" hand lotion? That is, a hand lotion which serves a dual purpose—cleanses by rolling the dirt and also leaves the hands soft and smooth. Milwaukee.

It has always seemed to me that rolling was considered an objectionable feature in a hand lotion. However, a rolling type lotion can be made from any standard mineral oil-containing emulsion lotion by substituting part or all of the mineral oil with paraffin. This of course, will make a somewhat stiffer product, hence less paraffin may be required. A cream product for the hands would probably be better for the purpose you have in mind, and you should be able to get a rolling action by adding a small proportion of casein to a standard vanishing cream type hand cream.

CAKE MAKE-UP: I would like to ask you to kindly send me the latest formula for cake make-up. I am a subscriber to your magazine and I trust that you will comply with my request at the earliest possible moment. Mexico DF.

Our company has recently become interested in manufacturing a cake make-up. We would appreciate your sending us a formula or whatever information you may have available. Thanking you for your kind attention to this matter. New York City.

The subject of cake make-up manufacture was treated quite extensively in the article by H. Hilfer appearing in the March 1944 issue of Drug & Cosmetic Industry, starting on page 285. I would suggest that you read this article before attempting any formulation of your own. An earlier article covering the basic patents of this type of make-up was written by Joseph Kalish in the June 1941 issue of this publication, page 658. Both of these articles should give you sufficient information to provide a working basis for experimental purposes. I should like to point out, however, that many of the basic formulas for making such products are covered by patents.

COLD PERMANENT WAVE: In the issue for February 1945, which has only just reached us, we notice an advertisement for a cold permanent waving solution. As specialists in this country in the manufacture of hair preparations we are interested in this new method of hair waving, and we would be obliged if you would supply us with a suitable formula, so we can consider including the cold permanent waving preparation in our range of products. London.

I presume that you are referring to cold permanent waves based upon the use of thioglycolic acid. Of course you realize that many of the processes employing this material are patented. Essentially, the solutions using this material contain about 5 per cent of thioglycolic acid in water adjusted to a pH of about 9. Some solutions contain 6½ to 7½ per cent of thioglycolic acid adjusted to a pH of 9.5 with ammonia or other alkali. Some manufacturers sell concentrated solutions of thioglycolic acid to be suitable adjusted by dilution and addition of alkali prior to use.

This solution is applied to the hair curled on wooden rollers, allowed to act for a specific length of time; this depending upon the concentration of the solution and type of hair being treated. The hair is then rinsed and treated with a fixing or neutralizing solution consisting essentially of acidified dilute hydrogen peroxide.

Of course, this is but a sketchy outline of the procedure. Not too many details are available in the literature but specific methods have been described in various patents. Most manufacturers of thioglycolic acid for cold permanent waves give specific instructions for the use of their products and some package it for private label distribution. I would suggest that you read a recent patent describing one such product, abstracted in some detail in our magazine, September 1944, page 344.

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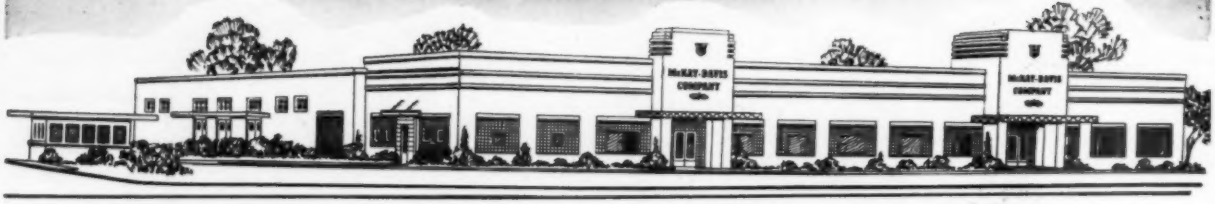

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TABLETS

EFFERVESCENT GRANULES AND POWDERS

LIQUIDS AND SYRUPS

CREAMS, OINTMENTS AND SALVES

FINE QUALITY EFFERVESCENTS by the *D'Onofrio* PROCESS

McKAY - DAVIS COMPANY

Manufacturing Chemists TOLEDO, OHIO

PURCHASING DEPARTMENT

Alcohol Prices Advance; Production Drops. Penicillin Shortage Continues. Serious Shortage in Caffeine Expected.

Major alcohol producers have advanced selling schedules on all grades of industrial ethyl alcohol in accordance with the new price ceilings announced by the OPA. Solvent alcohol in tank cars is now quoted at 56c a gallon. The new carlot price in drums is 63c a gallon. Eighteen drum lots are quoted at 65c while the price for 1 to 17 drums is 68c. The new and higher prices are f.o.b. distilling point, freight equalized with competing production points. Less than carload lots of 190 proof ethyl alcohol are quoted at $17.76 to $17.79 a wine gallon, tax paid.

Statistics covering the production, withdrawals, and stocks of ethyl alcohol in September, 1945, compared with September, 1944, and prepared by the Alcohol Tax Unit, Bureau of Internal Revenue, Treasury Department, are as follows:—

	Proof gallons 1945	1944
Production		
Ethyl alcohol	39,925,353	93,084,658
Withdrawals		
Tax paid	7,963,064	5,358,877
Tax free	48,953,224	100,614,605
Total	56,916,288	105,973,482
Stocks		
Bonded warehouses	47,556,447	27,593,871
Denaturing plants	92,029,384	60,847,322
Total	139,585,831	88,441,193

Quinine To Be Available

A combination of circumstances, it is believed, will make it possible for pre-war-scale production of quinine to begin shortly in the Dutch East Indies. Foremost is the fact that the large Bandang plant was not destroyed in the scorched earth measures taken before the Japanese occupation because of its importance to the population. Moreover, the Japanese were forced to keep it in operation by lack of shipping space to handle the whole bark. It is expected that at least the Pirangan plantations will have been worked and kept up, though others in Java and Sumatra may have been badly neglected. Nevertheless, even operating far below peak capacity, these sources could, before the war, meet the entire world demand.

NOVEMBER PRICE CHANGES

UP

Alcohol 2½c
Aloes Curacao 3c
Bay oil 5c
Burdock root 1c
Cascara Segrada 1c
Cedar wood oil 5c
Chamomile flowers Hung. 14c
Citronella oil Ceylon 20c
Coriander oil $2.50
Damiana leaves 27c
Dandelion root 22c
Dill oil 20c
Elder flowers 10c
Geranium oil Bourbon 75c
Lavender spike oil 25c
Lemon grass oil 5c
Mercury metal $7
Nutmeg oil 25c
Papain pure Powd. 25c
Pennyroyal oil 45c
Petit grain oil 40c
Plantago seed 5c
Psyllium seed 12c
Rhubarb root 7c
Sabadilla seed 8c
Thyme oil red 25c
white 20c

DOWN

Apricot kernel oil 5c
Bergamot oil 25c
Cananga oil Nat. $2
Caraway oil $4.25
Celery oil $1
Cinnamon bark oil $1.50
Ginger oil 50c
Henbane leaves 10c
Indol $5
Juniper berry oil $2.25
Wood oil 10c
Kamala 2c
Lime oil dist. 25c
Myrrh gum 2c
Rhatany root 1c
Saffron Spanish $1
Spruce oil 10c
Wormwood oil 15c

• Prices quoted in this section were current on the first of this month.

Penicillin Shortage

Supplies of penicillin, limited by recent low production, will be distributed to hospitals on a priority basis under a plan announced by WPB. October production was higher than September, which hit a low point for the past four months. Actual production was (billion units): July 688.98; August 636.51; September 586.37. WPB is arranging for production of a higher grade of corn steep liquor, which penicillin producers say is necessary for increased production of penicillin.

Caffeine Shortage

Production of caffeine is running slightly over 1,000,000 pounds annually at the present time, and according to factors in the fine chemical industry we are facing a serious shortage in this item. Most of the caffeine produced at present in the United States is derived through theobromine, which formerly was brought from South America in considerable quantities but which is now provided here. Tea wastes are largest single source in domestic solvent extraction processes, and far more important than coffee which provides the chemical through decaffeination.

A practical process for the production of caffeine by complete synthesis would probably displace foreign sources for theobromine and caffeine in this country. Wholly synthesized caffeine is said to cost in excess of $6 per pound, compared with the average of $2.65 for partly synthesized and extracted caffeine as reported for 1944 by the U. S. Tariff Commission. Best trade estimates indicate that production of the fully synthesized chemical is around 60,000 pounds.

The caffeine output last year of 646,000 pounds, (474,929 pounds in 1943) as reported by the Government, is believed to apply to the chemical derived through synthetic organic processes employing as raw materials cocoa shells and cocoa cake. The total may also include the 60,000 pounds obtained synthetically but not the larger amounts extracted from tea or coffee.

The foremost use of caffeine here continues to be the preparation of cola

(Continued on page 861)

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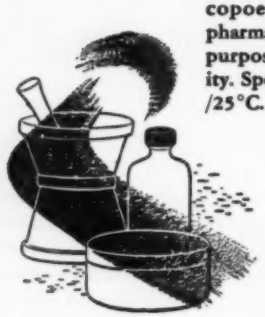

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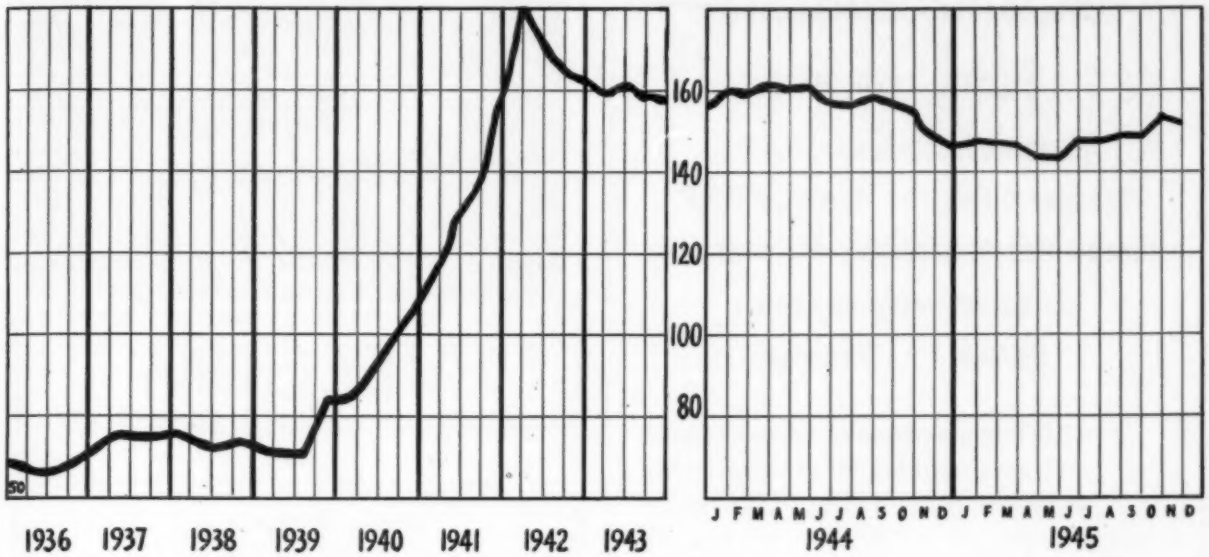
FACTORY — ELIZABETH, N. J.

50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for November declined from 156.9 to 155.1.

Vanilla Bean Outlook in Madagascar Appears Bright. Developments on Spot Indicate Strong Position Here.

Vanilla bean production in Madagascar during 1945 amounted to about 280 metric tons, or about 11 per cent more than the 252 tons produced in 1944, although acreage in 1945 amounted to only 29,652 acres as compared with 39,536 acres in 1944, according to a report in "Foreign Commerce Weekly." The increased crop in 1945 is attributed to the brighter shipping outlook which has caused the producers to cultivate more extensively.

About 98 per cent of Madagascar's 1945 vanilla-bean crop will be exported. Local consumption is small as there are no extract factories in Madagascar.

Exports of vanilla beans in 1944 totaled 360.6 net metric tons of vanilla beans as against 107.1 net metric tons exported in 1943. The reason for the increase in exports is that in 1944 Madagascar exported stocks held over from 1941 and 1942, as well as stocks produced in 1943. Vanilla beans are harvested during May, June, and July, and are cured for about 6 months.

In January 1943, the blockade was lifted, thus permitting the resumption of trade.

Stocks on hand on August 20, 1945, were estimated at 279 net metric tons, of which only about 79 metric tons were fit for export as the remainder, including old stocks held over since 1941, had become mildewed and rancid.

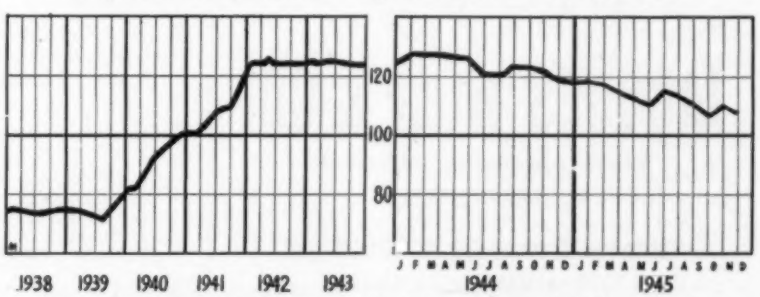
Wholesale prices for vanilla beans in Madagascar are fairly stable, because the controlled export prices practically eliminate fluctuations. Current wholesale prices according to grade are as follows: Grade one, 400 francs per kilogram (1 kilogram = 2.2046 pounds), equal to $3.66 U. S. currency per pound; Grade two, 310 francs per kilogram, equal to $2.84 per pound; Grade three, 275 francs per kilogram, equal to $2.52 per pound.

Price control is enforced through the medium of granting export licenses. The government refuses to issue export licenses to all brokers, commission agents, exporters, and other buyers who contract to sell vanilla beans below the fixed minimum export prices.

The market situation in August showed no marked changes when compared with previous years. It appeared that "pegged" prices guaranteed sufficient margins for producers, and it was expected that they would supply the market with available stocks. There were no commitments, either foreign or domestic, that could have had any effect on this commodity.

With the end of the war and the resumption of shipping on normal trade routes the outlook for the vanilla industry in Madagascar appears bright, the report said. Trade activity with continental France will increase; nevertheless exporters are expressing a desire to continue direct trade with importers in the United States, who, during the emergency purchased more than 90 per cent of the exportable production. As long as the government does not force exporters to earmark quotas for France or other countries, it appears that im-

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index declined from 133.8 to 130.1. Alcohol, cod liver oil and mercury showed price changes in this group.

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porters in the United States will be in position to continue buying a large percentage of the vanilla beans produced in Madagascar.

Exports of dried vanilla beans from Tahiti, Society Islands, French Oceania, during the second quarter of 1945 totaled 106,658 pounds valued at $224,-218. Of these exports the United States took 85,221 pounds, valued at $178,264, and Australia, the next best customer, 15,928 pounds, valued at $34,014.

Exporters estimated that most of the carry-over from 1944, which was believed to be about 40 tons, had been shipped, so it was expected that practically all shipments during the remainder of this year would be from the 1945 crop.

The trade estimates the 1945 crop at 130 tons, which, added to the carry-over of 40 tons, makes a total of about 170 tons to be exported from Tahiti during 1945.

Arnica Tight

Arnica flowers are in a critical supply position Late inquiries in the market have failed to uncover any goods available for immediate delivery.

Chamomile Flowers Up

Roman chamomile flowers were offered at $1.75 to $1.85 per pound on the basis of a future delivery at some undisclosed date. Such offerings are not numerous. Hungarian flowers were reported in low supply but the growing season is advancing in Argentina and unless Europe again becomes a buyer there, resumption of exports to the United States is a prospect for next Spring in this country.

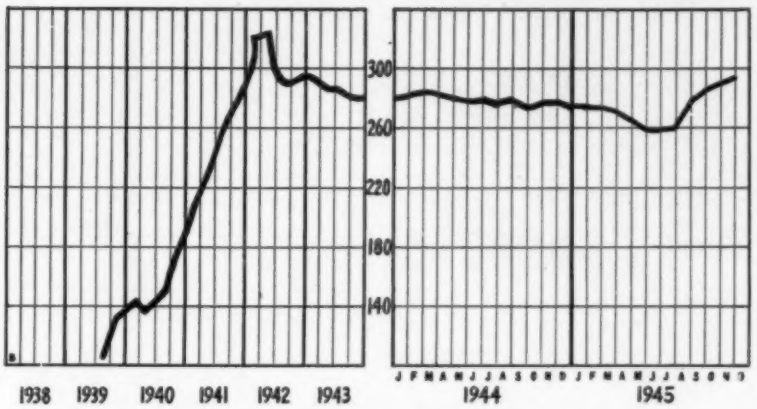
Papain Higher

This is an item to be watched just now. The turmoil in the primary market in the Far East has turned prices sharply upward and some spot quarters have advanced values to as high as $4.25 per pound. Other quotations range from $3.75 to $4.

Miscellaneous

Spot prices on mandrake root are higher since the fall crop proved a failure and no additional supplies will come forward until next May. Jamaican sarsaparilla root is firmer as the result of a greater demand. Seller's ideas now range from 35c to 40c a pound for spot goods. Some Mexican root afloat continues to be offered at 28c a pound.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced from 286.5 to 287.7. Aloes advanced to 48 cents; cascara rose to 43 cents.

Most of the balsams are in short supply. Holders of senega root in the primary market are not anxious sellers. The market remains bare of benzoin and quotations on the Sumatra or Siam varieties are entirely nominal. Good quantities of Karaya gum have arrived recently. Gum arabic is in good spot supply. High prices have been paid for elder flowers in the primary. Local houses are inclined to be very firm in their ideas. Damiana leaves are again offered at firm prices. Local houses are now able to pay the higher prices quoted by holders in Mexico and the increased costs are reflected in higher spot prices ranging from 40c to 45c per pound.

CAFFEINE SHORTAGE

(*Continued from page 857*)

drinks, secondary consuming sources being provided by the drug and pharmaceutical trades. The production of caffeine derivatives last year mounted to 62,800 pounds (23,111 pounds in 1943), and sales to 63,000 pounds The value of these sales is placed at $146,300, and the unit value at $2 32.

The output of caffeine citrate is placed at 46,200 pounds, sales of 46,200 pounds, the value $92,500, and the unit value at $1.99.

Production of caffeine sodium benzoate and caffeine sodium salicylate last year was 16,600 pounds; sales, 16,500 pounds; value, $53,800, and the unit value $3.26.

Insufficient supplies hence have centered interest in the plans of a large chemical manufacturer to erect a $1,-500,000 plant for the complete synthesis of caffeine. Nitrogen and hydrogen are employed in this method although details of the process have not been disclosed. Caffeine so obtained is reported to have a higher purity rating than the U. S. P. product.

Cod Liver Oil Down

Lower prices are quoted on medicinal cod liver oil because of a more favorable supply position but it is understood that the situation regarding poultry cod liver oil is exceedingly firm. Unless the latter becomes available at much lower prices major suppliers do not hold out much hope of recapturing a portion of the trade in poultry oil that had been lost during the war.

New and lower prices on medicinal cod liver oil range from $2.20 to $2.55 per gallon depending upon the quantity and quality.

From January through July 1945, Iceland exported 693,266 gallons of cod liver oil, valued at $1,465,151, compared with exports of 742,684 gallons of this product, with a value of $1,513,700 in the like period of 1944.

The amount of shark livers shipped from the States of Nayarit and Sinaloa, Mexico, during the first 8 months of 1945 was 677,185 pounds, valued at $324,771.15. The volume for the year ended July 1945 was slightly more than 74 per cent above that for the preceding year, but the value increased by only 35 per cent.

The smaller returns from this year's catch are the result of lower vitamin content, increased labor costs, and fixed overhead charges. Also, fishermen must go farther off shore for the sharks, and more firms are operating in this field.

It is not expected that there will be great activity in the shark-liver industry in this area until February 1946.

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Menthol Easy

With another new crop of peppermint oil about ready for menthol production in Brazil, the outlook concerning the future trend of prices in this commodity is becoming more clouded than ever. Some new crop offers should begin to appear in this market late next month. Based on reports in the trade, a large carryover is expected from the last crop, and this should serve to influence opening prices covering new production.

Approximately 800 cases of Brazilian menthol arrived in this market during the month of November. This is equivalent to approximately 18 tons. While a good part of this material has been sold, there is still a large quantity of spot menthol seeking a market. Some holders point out that while five or ten case lots are held for $4.50 per pound, larger quantities may be obtained at $4.35 per pound. The shipping price in Brazil is reported at $9 to $10 per kilo.

Firm offers of menthol have also been received from China for December shipment but it is understood that the prices are above those prevailing on Brazilian material. It is quite possible that exporters in China are not posted on market conditions in the United States. The offerings have been followed by bids at prices more in line with the quotations prevailing in this market.

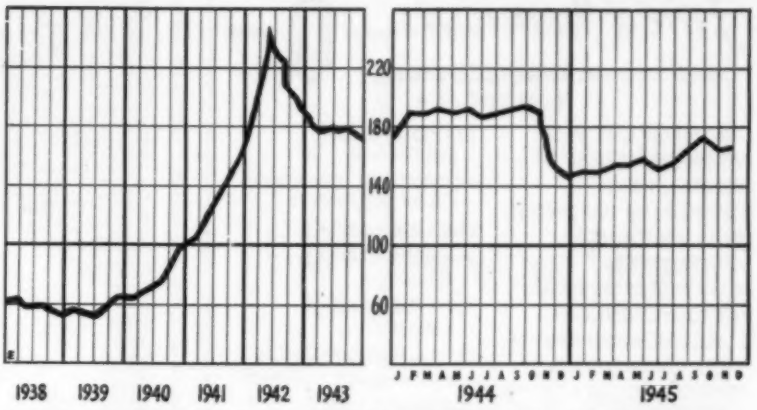
Miscellaneous

After a brief period of stability, mercury has renewed its advance. Any odd lots of camphor tablets lying around the market would bring $1 a pound or more. Glycerin stocks are believed to be at a dangerously low level. Aloin and podophyllin are commanding full prices. Total output of sulfa drugs declined to 459,565 pounds in August from 539,683 pounds in July. Sodium perborate continues in a tight supply position. Small parcels in the resale market are being held at from 20c to 22c a pound. Regular customers are reported receiving greater quantities of citric acid but there is little offered for sale in the open market.

ESSENTIAL OILS

A continued shortage of labor, difficulty in renewing worn out equipment, etc., were advanced by the trade to explain the continued shortage of many aromatic chemicals which, it was hoped, would be more freely available by this time. Lack of adequate shipping space and the prevalence of strikes in this and other ports delayed the arrival of certain much needed oils. According to the daily press a surplus of shipping is expected to develop in the Atlantic during the early part of January and this should materially relieve the disappointment of many consumers who have been unable to get just what they want.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index advanced fractionally from 161.2 to 161.5. Bergamot dropped to $8.75; cananga declined to $8; citronella was higher at $1.70.

Mint Oils Output

An increase of 467,000 pounds in the combined production of peppermint oil and spearmint oil this year over that of last year is forecast by the Crop Reporting Board of the Department of Agriculture. Total production is estimated at 1,921,000 pounds, of which 1,609,000 pounds are peppermint, against 1,454,000 pounds last year when peppermint oil output totaled 1,226,000 pounds.

The increase was the result of an expansion of acreage this year, plus a better yield per acre than last year. The estimates are based on September 1 conditions of the crops and are subject to revision in the final report of the board in December.

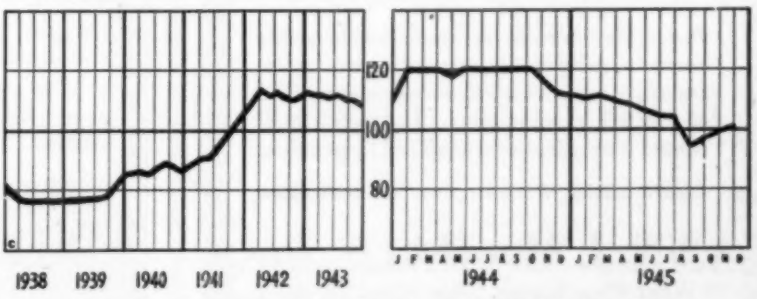
Production of mint oils by States this year, compared with that of last year, follows:

	Pounds	
Peppermint	1945	1944
Indiana	624,000	425,000
Michigan	450,000	308,000
Ohio	8,000	4,000
California	32,000	29,000
Oregon	308,000	300,000
Washington	187,000	160,000
Total	1,609,000	1,226,000
Spearmint		
Indiana	224,000	162,000
Michigan	88,000	66,000
Total	312,000	228,000

Miscellaneous

A further advance is noted in Turkish geranium oil. Both anise and cassia continue to be offered for shipments from China. Based on reports some anise was recently purchased for December shipment. Small unsold lots of Russian anise oil are being held here by dealers for the regular consuming trade, and quotations remain entirely nominal at $3.85 to $4 a pound. Lemongrass displays a somewhat better tone than in recent weeks. Limited quantities of Bourbon vetiver oil are available in the open market, and the general tone of the market is firmer with prices ranging from $32 to $35 per pound.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced from 101.4 to 102.0. Alcohol prices accounted for the change.

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IODOXYQUINOLIN SULPHONIC ACID
NEO CINCHOPHEN
OXYQUINOLIN BENZOATE
OXYQUINOLIN SULPHATE
POTASSIUM OXYQUINOLIN SULPHATE
PHENOBARBITAL
PHENOBARBITAL CALCIUM
PHENOBARBITAL SODIUM
TETRA-IODO-PHENOLPHTHALEIN SODIUM
THEOPHYLLINE

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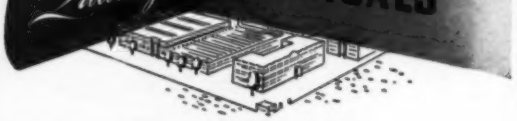

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Pre-Natal Influences in Packaging

(*Continued from page 777*)

portant manufacturer's confidence, by being asked for advice. It is good selling, as well as smart package planning to make use of the friendly, intelligent and influential buyer.

There is no system for package development, at least so far as this industry—certainly the most creative, the most vigorously active user of packages—has discovered. Perhaps the very qualities of perfume and cosmetic packaging, in their range of originality, daring lack of convention, beauty and ability to visualize a theme, result from a lack of rigid system. Creative imagination is the breath by which the industry lives—they seem to take it wherever they find it.

Obesity

(*Continued from page 782*)

today, bulk laxatives which are mechanical in action do find some employment. Swelling on the absorption of water, such laxatives create a feeling of fullness and so dull the appetite.

Thyroid, which acts by increasing the total metabolism, is probably the drug most commonly used as an aid in weight reduction. In patients showing clinical signs of hypothyroidism and in other selected cases thyroid extract is useful. Colton and his associates[32] believe that the administration of this drug in obese individuals with apparently normal thyroid function is often effective in reducing body weight. Bram[26] considers thyroid substance an effective adjunct to the reduction diet except in the event of nervousness, restless sleep, functional or organic heart disease, febrile conditions, diabetes, or a history of sensitivity to the drug.

Though often effective when its use is carefully controlled, thyroid is not a safe preparation. Its restricted sale to prescription only and court decisions condemning products containing it[27] are a measure of protection to the public. People know that thyroid will reduce weight, but over look the fact that its unregulated use may exact a price in such unpleasant symptoms as nervousness, sweating, tachycardia and tremors. Though rare, breakdown is a hazard of the unwise use of thyroid preparations.

The history of the late, but unlamented drug, dinitrophenol, offers an outstanding example of the unwise use of a preparation suggested for reducing obesity. Acting like thyroid to increase metabolism, excessive doses of dinitrophenol may cause metabolism to rise to such an extent that the victim may die of hyperthermia,[28] or, to put it another way, is cooked to death by the heat generated by the body. Because of these and other unpleasant after-effects, this drug is no longer used, but it did give the medical and public health world some unpleasant moments.

Today, the emphasis in weight reduction appears to favor drugs which depress the appetite. Of these, amphetamine is probably the most widely used. This use

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goes back to the work of Lesses and Myerson[29] who found that when amphetamine sulfate was administered to various psychotic patients, frequently there resulted a decrease in the appetite, a disappearance in the feeling of fatigue and an improved mental status. With decrease in appetite, there resulted voluntary dietary restriction, and weight loss occurred in many patients.

With these observations as bases, others began to investigate the possibilities of the drug. Soon a number of report[30, 37] appeared indicating that amphetamine had a favorable influence on obesity through its appetite-dulling action. The means by which amphatamine produces this effect are not quite clear and a number of theories have been put forward. Investigations by Kunstadter and Necheles[37] showed conclusively that amphetamine affects the feeling of hunger and probably reduces craving for food. From reading the several reports, the impression is gained that the loss of appetite, the increased activity and the restlessness of persons under the influence of the drug are sufficient to account for the weight loss which often follows its continued use.[38]

Although amphetamine has been termed the "drug of choice" in obesity,[32] more cautious opinions and evaluations have shown it to have certain definite limitations. It is realized that the ingestion of the drug as such does not cause loss in body weight.[39] It remains an adjuvant to diet, but it has the advantage of controlling the urge to eat between meals.[37] Albrecht's[40] studies indicate that the weight loss is not permanent, but is transient in the great majority of cases and returns when the drug is discontinued unless the patient remains on a special diet. Investigations[41] on obese children given amphetamine sulfate showed that use of the drug resulted in an immediate reduction in weight because of loss of appetite but the effect of the drug was soon lost after it was discontinued and, in some cases, while it was still being given.

Moreover, amphetamine is not without its hazards.[42, 43] Because disagreeable side effects may appear on continued use of the drug, it should be employed only under the direction of a physician.[38] The problem of addiction has also become a considerable factor in the use of this drug.[44, 45, 46] Collapse and death has followed its use in at least one instance.[47] It was because of these dangers that the Council on Pharmacy and Chemistry of the American Medical Association[48] felt it necessary in 1943 to issue a warning on the need for caution in the use of amphetamine in the treatment of obesity.

An adverse court decision with regard to the patent status of amphetamine resulted, a year or so ago, in the exploitation of weight reducing tablets containing this drug. Some of the products offered were based on combinations of amphetamine and thyroid plus such additions as atropine sulfate, alcin or phenobarbital. The recent reversal of the patent decision will undoubtedly mean the withdrawal of such multiple action preparations.

Other drugs have been advocated as being useful to reduce obesity by dulling the appetite. Dextroamphetamine, one of the two optically active isomers of amphetamine, has been studied and recommended by Colton and his associates.[23] Propodrine hydrochloride, suggested by these workers as an alternate for obese patients who cannot tolerate d-amphetamine, also has its advocates.[17] Originally investigated by Hirsch[49] as a means of controlling the desire for food, the more recent comparisons by Tainter[50] indicate that propodrine is weaker than amphetamine but, since it lacks the unpleasant central excitant effects of the latter, might well be used first in treating obesity. Both of these drugs, he believes, can probably serve only as adjuvants to the commonly employed measures in controlling obesity.

Bram[26, 51] has advocated the use of digitalis in treating obesity and has presented evidence of its effectiveness in controlling excessive appetite by producing a relative aversion to food. Classing digitalis as an aid in a regime including a reduction dietary and practical psychotherapy, he stresses the need for care in administering this drug to prevent actual vomiting or nausea. Before administering digitalis, the patient must be properly examined with a view to contraindications and must remain under the physician's observation.

On occasion it has been observed that hunger could be controlled by belladonna plus bromide or phenobarbital.[52] In discussing the value of belladonna and related alkaloids in the treatment of obesity, Cutting[25] has remarked that such drugs are presumed to act by drying the mouth and thereby making food less appetizing. In clinical practice, he notes, they are poor and ineffective.

Disregarding the important cosmetic angle, obesity remains a major problem because of its adverse effects on health and longevity. Despite increasing knowledge of its causes, treatment of obesity still depends on the control of diet, and other means, including drugs, remain adjuvants to this basic measure.

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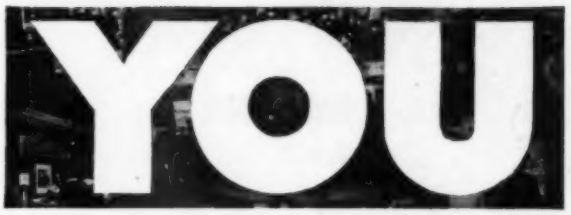

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Ralph R. Patch

(*Continued from page 775*)

as he saw the opportunity to leave the company he founded in capable hands, he passed his responsibilities on to Ralph. He never regretted his decision—and neither did the industry.

General manager Ralph Patch began a vigorous program of simplification and standardization. Emphasis was placed on developing new and different products. In the first three years young Patch was major domo, he discontinued three thousand items. For the next twenty-seven years, the E. L. Patch Company progressed and the new policy paid dividends. Sugar of milk . . . flavored cod-liver oil . . . Nepto Lotion . . . Kondremul . . . Gadoment . . . and Secremol are only a few of the products the physician associates with Patch. Distribution has been broadened and the detail staff increased.

The boss of Patch did not confine his attention to his company problems alone. He became very active in the ADMA and the APMA—serving at different times as president of the APMA and vice-president of the ADMA. His qualities of leadership and vision have been influential in molding the pharmaceutical industry to what we know it as today.

In December, 1942 the Office of Surgeon General, U. S. Army, called Ralph Patch to become Manpower and Labor Supply officer. He discharged his responsibilities so well that in September, 1943 he was promoted to become the Chief of the Liason Branch in the Supply Service. This past summer able Lt. Col. Ralph Patch again became private citizen Ralph Patch.

Friends say that the affable head of the E. L. Patch Company is planning to take things easy from now on—being concerned only with his company's broad policy matters and letting his very capable general manager, Fred Lawson, handle the administration of the business.

Sixty-three year old Ralph Patch is now ready to settle down and do some of the things he never had much time for before. Travel, music, books, golf and four grandchildren are going to take up most of his time. But he stands ready to pass on the benefits of his long experience in both business and community life to those who ask for it. He advises the industry that if it will devote itself to serving the medical profession and will settle all questions on the basis of public interest, pharmaceutical manufacturers will continue to grow and prosper.

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Medicinal Drugs

(*Continued from page 774*)

treatment of various wounds and infections, which has lead to the development of numerous specialized products for external use. Simultaneously there developed medication in standardized form for internal treatment such as we see in the various forms of tablets, ampules, etc.

On the heels of this development came penicillin as an ally to the sulfa drugs and of immediate benefit to the military forces throughout the world. By reason of its greater freedom from untoward reaction and its selective action toward certain classes of specific organisms, its interest has engaged the attention of the entire medical profession. Research laboratories have continued their pursuit of newer combinations of penicillin to afford greater stability to prolong the shelf life of the drug, and to extend or increase its therapeutic action for topical, parenteral, or oral administration.

Correlated closely with this development now come other forms of antibiotics under development such as streptomycin and tyrothricin.

And so, summing up, we have a rapid abandonment of substitute materials and a return to pre-war formulations as the materials become more freely available; a continuing and accelerating trend to definite synthetic chemical substances with known therapeutic action; a trend away from liquid products to dry materials tablets, powders, etc.; an accelerated trend to the control of insect life as a means of elimination of potential carriers of disease; a partial but retarded development of packaging materials upon which hinge many important new products; and finally a spectacular and rapid development of the chemotherapeutic agents and antibiotics. With the continued power of research inevitably will come many others.

Otto of Rose

(*Continued from page 783*)

tivation. Rose acreage was sharply curtailed because the growers substituted edible crops and especially the much sought-after potatoes. Stocks are said to have accumulated during the five years of war due to the inability to ship the essence into the world markets which normally consume the greatest part of the production.

But under the present control of rose oil, the market is at a standstill due to the terrifically high prices at which it is being offered. Against a prewar so-called normal price of approximately $8.00 per ounce, otto is now being offered at prices starting at $40 per ounce and ranging to $45, $48, and $50 per ounce. The story that is being told is that there is only a last 200 kilos available, but importers feel that when this amount is sold at the high prices prevailing, there will be another "last" 200 kilos, and then numerous repetitions of the performance. Also importers are not certain that the

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Russians will not standardize all rose oil, blending the Bulgarian material with the Crimean oil and selling the resulting product under a single brand name coined by the Russians. In such a case, Bulgarian otto of rose, as it was known in the past, would entirely disappear from the market.

The abnormally high prices prevailing for rose oil have just about killed the oil as a commodity. Certainly no importers will take on any appreciable supplies at the present market. Rose at a normal price is a useful commodity, but at present levels it is more like a museum piece. Certain people want small amounts of the real thing. For these people supplies are said to be plentiful. Rose oil keeps filtering into the country from all different directions. Returning servicemen, refugees and others coming from abroad quite often bring small lots of rose with them much in the manner that the refugees from Germany before the war flooded the market here with German Leica and Contax cameras. The value of rose oil being what it is, these people find that bringing with them small amounts of rose oil is an easy way of making some money, or an easy way of getting some real money out of the country.

Practically all essential oil importers and perfume material houses in this country have replacements for otto of rose that are being widely used and that are proving most satisfactory to the people who are using them. That such a condition has arisen is the natural result of the high prices prevailing for true rose oil. Doubtless as time moves on and production of rose oil is resumed on a normal scale, stocks will back up and prices will decline. Only when such a condition comes about will true rose resume its normal place in the composition of perfumes, since until that situation develops, replacements will continue to be the materials used because of economic necessity if not the materials of choice.

ANALGESIC BALMS: We would appreciate any formulas that you may have on file for making analgesic balm. A rather typical analgesic balm can be made as follows:

Lanolin anhydrous	45.0
Yellow petrolatum	25.0
Menthol	2.0
Ethyl amino benzoate	2.5
Distilled water	18.0
Oil wintergreen	7.5

Triturate ethyl amino benzoate with a portion of the yellow petrolatum until smooth. Gradually add the remainder of the petrolatum and the lanolin. Dissolve menthol in oil of wintergreen and add the solution to the first portion, triturating until thoroughly mixed. Finally add the water and mix until homogeneous.

A somewhat simpler analgesic balm can be made from:

Menthol	5.0
Methyl salicylate	10.0
Hydrous wool fat	75.0
White petrolatum	10.0

Face Powder

(*Continued from page 784*)

wet mixture) titanium dioxide has a tendency to agglomerate, even though the particle size averages only 0.4 microns. However, it is possible with suitable apparatus in a mixture of 20 per cent titanium dioxide and 80 per cent talc to surface coat a 15 micron talc with 0.4 micron particles of titanium dioxide. The resulting pigment from this process has a hiding power equal to zinc oxide and yet easily dispersed. Also, despite the fact that titanium dioxide is priced at 35 cents per pound while zinc oxide costs only 10¾ cents per pound, titanium dioxide has five times the covering power of zinc oxide, and the mixture mentioned of equal hiding power when compared with zinc oxide is of the same cost as zinc oxide.

While a surface-coated mixture of this kind must be made by the use of very special equipment, supplies of it are now freely available to face powder manufacturers. Doubtless there will always remain a certain market for the older type of face powder since the use of cake make-up is by no means universal. However, as the use of cake make-up increases, the demand for this newer type of face powder should broaden and those that are offering it will be the ones to reap the harvest.

Ben F. Zimmer, Jr., Lloyd W. Speck and Charles C. Bryan of Fritzsche Brothers, Inc., with 10-point buck, one of eight deer brought in during a hunting trip near Moncton, New Brunswick. H. P. Wesemann, the fourth member of the party, took the picture. Mr. Speck represents Fritzsche in Canada; the others are from the New York office.

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Should Insurance Companies Sponsor Medical Research

(Continued from page 779)

members of the pharmaceutical industry who have had many years of experience in sponsoring research within and without their respective companies. If it is not too late, we suggest careful thought be given to the feasibility of setting up a pharmaceutical industry advisory committee. The Life Insurance Medical Research Fund's advisory council would do well to seek the advice of men who know how to spend money for medical research.

U. S. life insurance companies have now shown that they can and should sponsor medical research. We hope they will take an ever-increasing interest in supporting worthwhile medical projects aimed at preserving and bettering human life.

PRODUCTION FORUM

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Cooling Element

Using experience gained during the war in producing units that cooled highly concentrated sulfuric acid from 475° F. to 175° or lower in making high explosives, the National Radiator Co. of Johnstown, Pa., has developed its new U-Cast Hairpin Cooler Element for peacetime applications. The new unit is used for cooling any liquid, but is especially adapted for cooling acids or strong alkalies under extreme conditions that usually results in the solutions quickly attacking other metals.

The new elements in these applications are submerged in the solution and the coolant, usually water, is passed through the element itself. The sections of the unit are cast of gray iron that is highly resistant to attack from both the solution and its fumes.

The National Radiator Co. developed the new elements at the request of the Ordnance Department. The coils formerly used in the acid cooling vats of munitions manufacturers had to be completely replaced at least every three months, resulting not only in high replacement costs, but in loss of time that was even more important in the accelerated munitions program. After months of service in the same vats the new cast iron elements showed no corrosion either above or beneath the liquid line. In some cases a small amount of sulfate deposit formed above the liquid line, but a coating of acid-resistant paint eliminated this. The cooling capacity and efficiency of the new elements were as satisfactory as or better than the coils formerly used, the plants reported.

Laboratory Dryer

An electrically heated laboratory dryer, with automatic temperature controls as standard equipment, has been announced by Proctor & Schwartz, Inc., drying machinery manufacturers, 7th Street and Tabor Road, Philadelphia 20, Pa.

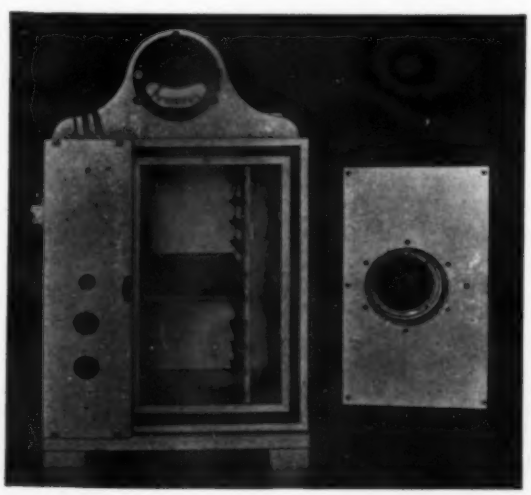
This highly compact machine meets the need for close control and low cost in the drying of small samples of a wide variety of materials. The construction of the dryer is such that materials may be dried on trays or pallets, or hung on wires, sticks or hooks.

The automatic temperature control feature of this machine is vitally important to laboratory drying. With this feature it is possible to maintain accurate control of temperatures within the dryer at all times during the drying operation. Temperatures, which range up to 300 degrees F., are produced by six electrical heating elements. Hand switches control each heating element.

Positive circulation of heated air is maintained actively throughout the interior of the cabinet, and is produced by a direct motor driven fan. Exhaust of moisture-laden air is provided for in order to keep humidity inside the dryer at ideal point at all times during the drying operation.

The cabinet and door of the dryer are constructed of heavy gauge sheet metal and are insulated with 2″ thick rock wool and cork. This construction effectively prevents heat loss and aids in maintaining uniform temperatures. The interior can be observed during the drying process through the porthole without opening the door.

Outside dimensions of the cabinet are 31″ wide, 36″ high and 25″ deep, exclusive of the stand or table and exclusive of the temperature control on the top. There is room in the dryer for 10 trays, 12″ x 20″ each, with a total surface area of 2400 square inches or 16.6 square feet. The dryer is usually mounted on a specifically constructed stand, which is extra equipment, the dimensions of which are 2′ high, by 2′ 7¼″ wide, by 2′ deep.



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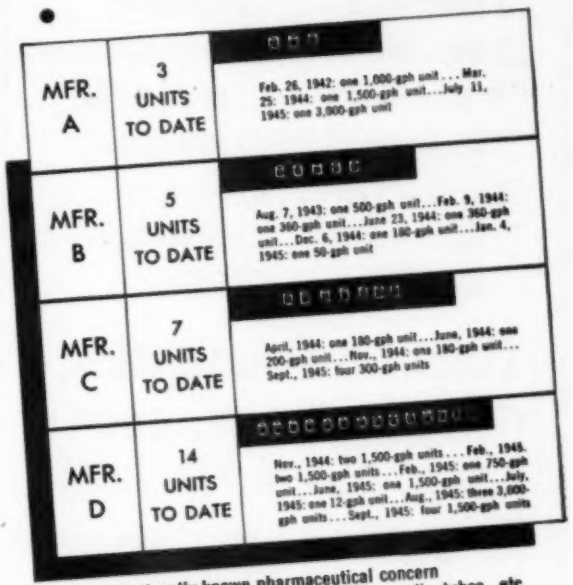
MFR. A
3 UNITS TO DATE
Feb. 26, 1942: one 1,000-gph unit . . . Mar. 25: 1944: one 1,500-gph unit . . . July 11, 1945: one 3,000-gph unit
MFR. B
5 UNITS TO DATE
Aug. 7, 1943: one 500-gph unit . . . Feb. 9, 1944: one 360-gph unit . . . June 23, 1944: one 360-gph unit . . . Dec. 6, 1944: one 180-gph unit . . . Jan. 4, 1945: one 50-gph unit
MFR. C
7 UNITS TO DATE
April, 1944: one 180-gph unit . . . June, 1944: one 200-gph unit . . . Nov., 1944: one 180-gph unit . . . Sept., 1945: four 300-gph units
MFR. D
14 UNITS TO DATE
Nov., 1944: two 1,500-gph units . . . Feb., 1945: two 1,500-gph units . . . Feb., 1945: one 750-gph unit . . . June, 1945: one 1,500-gph unit . . . July, 1945: one 12-gph unit . . . Aug., 1945: three 3,000-gph units . . . Sept., 1945: four 1,500-gph units

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READERS'

EYEBROW PENCIL: I have been trying to work out a method for making eyebrow pencils, but somehow or other I don't seem to be able to get the right product. Perhaps you can give me a formula showing the correct proportions and materials to be used in making such a product. Brooklyn.

A standard eyebrow pencil formula is as follows:

Yellow wax	**10.0**
Paraffin	**30.0**
Cocoa butter	**30.0**
Petrolatum	**20.0**
Carbon black	**10.0**

OPHTHALMIC OINTMENTS OF PENICILLIN: We have been requested to prepare an ophthalmic ointment of penicillin without using an aqueous medium to disperse or dissolve the penicillin. If this is possible, would you advise us what material to use and proper procedure in regard to same. Any information that you can give us in regard to this subject will be greatly appreciated. Baltimore.

Quite a number of such preparations have been described in the recent medical and pharmaceutical literature. Ophthalmic penicillin ointment can be prepared by incorporating calcium or sodium penicillin in an ointment base composed of wool fat, petrolatum or white petrolatum, or any mixture of two or all of these with or without liquid petrolatum, white wax, yellow wax, cottonseed oil or peanut oil, or any mixture of two or all of these.

One standard preparation is formed by adding sufficient penicillin sodium to Simple Ointment U.S.P. to give a product containing 2500 units per gram. Another simple preparation of this type is as follows:

Petrolatum or hydrous wool fat	**25 parts**
Cold cream	**75 parts**
Penicillin sodium, q.s. to 250 to 500 units per gram	

A suggested method of preparation is: Levigate the penicillin sodium with the petrolatum (or the hydrous wool fat, if it is selected in preference) to a smooth paste and incorporate the mixture with the cold cream. Of course, such products must be prepared under asceptic conditions and the bases preferably sterilized before the incorporation of penicillin. Storage in a refrigerator is generally indicated, to preserve the potency of the preparation.

PRECIPITATION PROBLEM: We prepared a solution of zinc chloride similar to prevailing astringent mouth washes. We run into trouble of precipitation after standing. Can you offer any possible solution to the problem. Reading.

This precipitate may be due to any one or a combination of factors. Not knowing your formula it is impossible to determine whether the question of incompatibility enters the picture. It would be advisable to allow your product to age for a day or so at least, then chill and filter. Of course, there is always the possibility that a delayed reaction occurs after filling, or that the solution may react with the glass of the container.

QUESTIONS

INSECT REPELLENTS: Can you refer me to an article on insect repellents. Have you written an article on this subject in the "Drug & Cosmetic Review?" Camp Edwards.

The following articles have been published in DRUG AND COSMETIC INDUSTRY over the last few years:

E. G. Thomssen: "Cosmetics as Insect Repellents," July 1945, page 46

H. Hilfer: "Insect Repellents," July 1944, page 42

M. A. Lesser: "Insect Repellents," Feb. 1941, page 148

I would also suggest that you send for a copy of U. S. Patent 2,356,801, under which citizens of the United States may obtain licenses from the Secretary of Agriculture. It is a most indicative patent covering modern types of repellents.

DEODORANT PREPARATIONS: We would appreciate it very much if you could supply us with an up-to-date working formula of a liquid deodorant and a powder deodorant. We are very anxious to help out one of our good customers in developing a product of this nature, and we have some formulas in our records, however they are of the more obsolete type of 15 or 20 years ago. Chicago.

Products of this type are frequently described in our publication. However, a typical formula for a deodorant liquid is as follows:

Aluminum chloride	15.0
Water	81.5
Glycerine	3.0
Perfume	0.5

A simple deodorant powder preparation may be made along the following lines:

Purified zinc peroxide	20.0
Zinc stearate	10.0
Boric acid	30.0
Talc	39.5
Perfume	0.5

PERMANENT WAVE SOLUTION: Could you prescribe for me a formula for making up a first class permanent waving solution? I am an analytic chemist by profession and could easily make it up if I had some idea on basic formulation of such products. Wellington, N. Z.

A standard formula for a permanent wave solution is as follows:

Ammonium carbonate	2.0
Potassium carbonate	1.4
Potassium sulfite	2.5
Ammonium hydroxide sp. gr., 0.900	3.1
Sulfonated castor oil	1.0
Distilled water	90.0

Dissolve the first three ingredients in the water, add the oil and mix well.

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(*Continued from page 842*)

Para Type Hair Dyes

S. P. Jannaway approaches the subject of hair dyes in general and para type dyes in particular with a great deal of wariness. Writing in *The Perfumery and Essential Oil Record* (36: 236, 1945), he remarks that the subject of hair dyes is under something of a cloud and the field is often shunned by the cautious chemist. Reasons for this attitude are apparent in the many regulations covering the use and control of hair dyes, plus the need for patch tests, and skill in applying the various agents. In his opinion a really successful hair dye should be:—

(*a*) Effective without discomfort to the client—free from irritant, caustic or toxic effects;

(*b*) non-injurious to the texture of the hair, leaving it in a condition of soft, natural lustre;

(*c*) stable in its action, so that the new color persists even under the further action of sunlight, permanent waving and so forth;

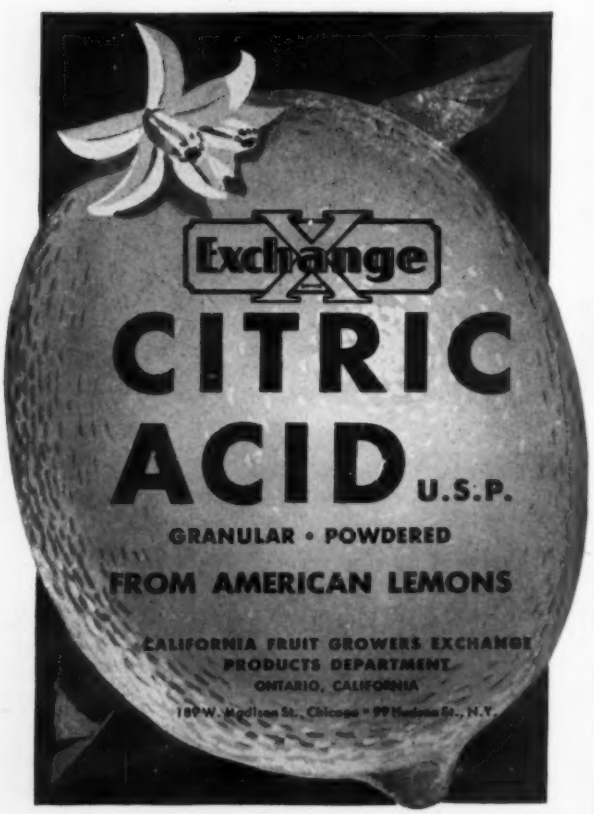
(*d*) able to match the former natural shade of the hair or such shade as the client selects; and

(*e*) able to provide a standard match in cases of subsequently grown hair that calls for the blending process known to the trade as "retouching."

Of the four main groups of hair dyes, oxidation dyes (e.g. para-phenylene diamine) are the most important tinctorially, the results they give are unsurpassed by any of the other groups. They consist chiefly of aromatic diamines, amino-phenols and diphenols, which undergo oxidation to give diimines, quinone-imines, quinones, and further chromophoric complexes of the Bandrowski's base type.

Of outstanding importance as a pioneer hair dye of this group is "para" or paraphenylene diamine. Another important amine dye is the homologous *p*-toluylene diamine. Unfortunately both these dyes can give rise to idiosyncratic dermatitis, and both are included in the provisions of the Poisons Rules. While the search for an effective and yet perfectly harmless hairdye continues, use is still made of "para" and its closely associated compounds.

Para-phenylene diamine is an important dye base because of its two amino groups in the para position. If exposed to the atmosphere, it undergoes oxidation and begins to darken in color. Such oxidative development is considerably accelerated by agents such as hydrogen peroxide. After briefly discussing the factors responsible for the tinctorial properties and toxicity or irritant properties of this base, Jannaway, points out that the hair dye manufacturers' chief problem has been to reduce or eliminate the element of toxicity without unduly impairing the coloring effectiveness of the dye. The more obvious means of modifying the specific reactivity of *p*-phenylene diamine, by introducing acidic and other groups into the nucleus or into the side chain, have naturally received considerable study. Sodium bisulfite and other sulfites have also been used as reducing agents to modify reactivity. More recently use has been made of less reactive dyes, mordanted with reversed (cation-active) soap preparations; and of reduced "leuco" dyes derived from quinone-imine, etc. Nor must one overlook the homologous tolyl compound, *p*-toluylene diamine, which is somewhat less active and irritant than *p*-phenylene diamine, though not notably so. Finally the amino-phenols, dihydric phenols, diamino diphenylamines, etc., have been successfully utilized to replace, in part, the diamines.



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The function of products intended for incorporation in *p*-phenylene diamine type hair dyes is usually one or both of the following:—

(*a*) to decrease toxicity by decreasing the concentration of the amine or by forming loose molecular compounds therewith; and

(*b*) to modify the tone of the developed color. By judicious variation of dyestuffs and developers and of their concentration, a wide range of admirable shades is possible.

A listing of some of the more important dyestuffs that may be employed as a partial or total replacement of *p*-phenylene diamine is given; followed by a very indicative review of the patent literature pertinent to this problem.

According to Jannaway, the usual practice, when marketing the oxidation type of hair dye, is to put the dye solution itself up in one bottle and the "developer" in another. Brown bottles are almost always used in order to prevent as far as possible the instability of the solutions due to light reactions. Bottle A contains from 1 to 8 per cent approximately, of the dye in solution—the proportion varying according to the depth of color given by the constituents (e.g., 2 per cent "para" might be required in a black dye but could be replaced by 3.5 per cent or so of the less toxic *p*-amino diphenylamine). In general, the lighter shades contain a lower concentration of the dyes than the darker shades, but this again also depends upon the actual dyes used and the intensity and duration of the oxidation process.

Bottle A may contain, in addition to the dyestuffs and water, such materials as alcohol, glycerine, triacetin and other solvents. Addition of sulfites is commonly supposed to decrease the dyes' irritant properties so that use is sometimes made of sodium sulfite, sodium bisulfite, sodium thiosulfate, potassium sulfite, ethanolamine sulfite, etc. Other potential constituents include resorcin, pyrogallol, metal salts, henna, lawsone, and so forth.

The contents of Bottle B may be hydrogen peroxide solution or a solution of perborates, persulfates, permanganates and other oxidizing agents. Superior to these, because of its stability and reliability, is the solid urea peroxide, the strength of which is standardized at a high level of active oxygen. Thus five 8-grain tablets dissolved in 1 fluid ounce of water give a solution of 10 vols. strength.

The usual method is to mix the contents of an A bottle with a B bottle, just prior to the dyeing treatment. In Continental practice the dye bottle contains either 10 c.c. or 20 c.c. while the developer bottle, of the same capacity, contains one to four 0.5 gram tablets of urea peroxide. The tablets are transferred to a small bowl or saucer, while the empty bottle is filled to the neck with water. The water is then poured on to the tablets, which are crushed up and dissolved into it. Finally the developer and dye solutions are mixed together and applied. The actual technique varies widely according to the views and training of the operator and the strength of the oxidizing agent and the duration of application make for enormous differences in the shade ultimately obtained. Pre-treatment consists of shampooing, to remove grease from the hair; and sometimes with a preliminary washing with hydrogen peroxide solution and ammonia. The latter is a useful practice, for it aids rapid penetration of the dye, but it is obvious that it should be carefully controlled and not carried out to an excessive, devitalizing extent.

A number of typical formulas are given, but it is stressed that they are

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Black

p-Amino diphenylamine	2.0 Gm.
4, 4 diamino diphenylamine	2.0 Gm.
Diaminophenol hydrochloride	3.0 Gm.
p-Amino phenol	1.0 Gm.
Resorcinol	0.5 Gm.
Ethanolamine sulfite	12.0 Gm.
Alcohol	25.0 cc.
Water	80.0 cc.

Developed with 20 vols. hydrogen peroxide or the equivalent of solid urea peroxide.

Medium Blonde

Methyl *p*-aminopenol sulfate	1.0 Gm.
o-Aminophenol hydrochloride	1.5 Gm.
Diaminophenol hydrochloride	0.5 Gm.
Sodium sulfite	4.0 Gm.
Ammonia (10%)	5.0 cc.
Alcohol	20.0 cc.
Distilled water	80.0 cc.

Developed with 10 vols. hydrogen peroxide or its equivalent of urea peroxide.

Brown

Para-toluylene diamine	3 Gm.
Para-amino-diphenylamine	3 Gm.
Para-aminophenol	1 Gm.
Sodium sulfite	6 cc.
Alcohol (50%)	100 cc.

Bottle No. 1 contains 10 cc. of this solution; bottle No. 2 contains 3 pastilles of 0.5 gram urea peroxide. Contact time 1 hour.

Chestnut

Para-toluylene diamine	2 Gm.
Para-Aminophenol	2 Gm.
Para-aminodiphenylamine	1 Gm.
Sodium sulfite	5 Gm.
Alcohol (50%)	100 cc.

Bottle No. 1 contains 10 cc. of this solution; bottle No. 2 contains 3 pastilles of 0.5 gram urea peroxide. Contact time ¾ hour.

These broad indications may serve as a basis for evolving dyes of various shades.

Newly Isolated Principles of Senna

Senna is a drug of great antiquity and one of the most dependable laxatives of vegetable origin. However, the well known variability in potency of senna and its preparations as well as the side effects of nausea, vomiting and cramping have long discouraged the medical profession in its use. Nevertheless, it is widely employed in domestic medicine in various forms, particularly as an infusion known as "senna tea."

Studies into the chemistry of senna have resulted in the isolation of its various principles some of which, such as emodin, have long been known while others are new. The most interesting of the newly discovered substances are two specific glycosides known as sennosides A and B. These substances are isomeric and have the same empiric formula, $C_{21}H_{20}O_{10}$. Both appear as sparkling light yellow crystals with characteristic physico-chemical constants. A fact of especial interest is that hydrolysis cleaves the two glycosides (B easier than A) into aglycones in the molecular proportion of 1:1 and oxidation of both aglycones leads to the anthraquinones known as Rhein.

Pharmacologic investigations show that the combined sennosides and particularly the A fraction, produce the desirable laxative effect of senna. Emodin which occurs free in the leaves apparently is responsible for much of the cramping and griping side effect.

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Bioenergetics And Growth, by Samuel Brody, Ph.D., Chairman, Committee on Growth and Energy Metabolism, College of Agriculture, University of Missouri, 1023 pp., Reinhold Publishing Corp., New York, $8.50.

This volume presents an integration of the results of the researches sponsored by the Herman Frasch Foundation for Research in Agricultural Chemistry at the Missouri Agricultural Experiment Station. The major purpose of these investigations was to make a comparative study of the energetic efficiencies of agricultural processes, such as those concerned in the production of meat, milk, eggs, and muscular work, along with the factors influencing these efficiencies. The field is a very broad one and the discussions in this volume range over a wide territory. They include such important considerations as the energy cost of maintaining animals, of transforming feed into body tissue, milk, eggs, and other desired products, the relation of the speed with which the transformations occur to the efficiency of the process, the influence of the size of the producing animal on the efficiency and profit of the productive enterprise, and the influence of the rate of the process on the rate of aging. Many of the factors influencing efficiency, such an enzymes, minerals, vitamins, and hormones, are analyzed, largely with the aid of available literature. The broad research project, the results of which are reported herein, was an institutional enterprise involving the cooperation of four departments in the Missouri Agricultural Experiment Station,—Dairy Husbandry, Animal Husbandry, Poultry Husbandry, and Agricultural Chemistry. Many technical aspects of this research have been published as research bulletins of the Missouri Station and as technical articles in scientific journals. This volume brings together in integrated form the essential material incorporated in these many publications, along with much additional material brought together by the author.

A Text-Book Of Pharmacognosy, by George Edward Trease, B. Pharm., Head of the School of Pharmacy in the University College of Nottingham, Fourth Ed., 799 pp., The Williams & Wilkins Co., Baltimore, $7.50

The present edition of this well-known work has been thoroughly revised and has been enlarged to the extent of 59 pages and 37 illustrations. While the general arrangement of drugs under plant families remains unchanged, a rearrangement and amplification has taken place in the chapters dealing with the constituents of drugs (Part IV) and in those treating of microscopy (Part V). This work is divided into five main parts as follows: Part I—General Principles; Part II—Drugs Of Vegetable Origin; Part III—Drugs Of Animal Origin; Part IV—Chemistry; Part V—Microscopy.

Essentials Of Clinical Allergy, by Samuel J. Taub, M.D., Professor of Medicine, Cook County Graduate School Of Medicine, 198 pp., Williams & Wilkins Co., Baltimore, $3.

The practical clinical approach to the numerous allergic diseases as seen in practice is of real value to every medical man since allergic factors arise in almost every branch of medicine, surgery, obstetrics and the specialties. Designed for quick, accurate reference or study, this brief but thorough presentation places strong emphasis on diagnosis and treatment and gives clear definitions of the materials employed in therapy.

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WANTED: Pharmacology assistant, male with bachelor's degree or equivalent. Some experience in animal work essential, but advanced training and experience not required. Position with a pharmaceutical manufacturer in Middle West. Write giving qualifications, salary expected, draft status, and send photo. Box 806, DRUG & COSMETIC INDUSTRY.

SALESMAN: Experienced, forceful salesman with established following in department and drug store trade. Can secure solid connection with nationally advertised line of smartly packaged toiletries and cosmetics for central states. Box 818, DRUG & COSMETIC INDUSTRY.

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FACTORY MANAGER—exceptional opportunity for executive experienced in converting and packaging of branded products requiring high quality standard for national distribution. Must have knowledge of modern factory methods and be capable of initiating standards and controls to insure quality at lowest cost. Engineering experience may be desirable but not essential. Our employees know of this ad. Box 820, DRUG & COSMETIC INDUSTRY.

WANTED: Sales Manager by well established nationally advertised eastern manufacturer of ethical pharmaceuticals and biologicals. Must be experienced in handling salesmen and detail force. Pharmacy or scientific degree helpful, but not essential. Should know sales training methods. Unusual opportunity for future as job is one of key men in company. Write, stating full qualifications to President, Box 823, DRUG & COSMETIC INDUSTRY.

Help Wanted

PRODUCTION MANAGER: One of America's growing manufacturers of pharmaceuticals offers splendid opportunity to man who can fill this bill: 1. Experience in production of pharmaceutical products, preferred. 2. Executive ability; good organizer; must know modern plant and control methods; be able to instill loyalty and cooperation in employees. To re-organize and supervise all manufacturing from trial runs to complete operation, including packaging and shipping. Write, Box 821, DRUG & COSMETIC INDUSTRY.

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PERFUMER desires connection with house of large production to develop new perfume odours or improvement of old from primary aromatic chemicals and Essential oils. Box 815, DRUG & COSMETIC INDUSTRY.

SALES REPRESENTATIVE for Pacific Coast territory. Essential Oils-Perfume Compounds—Flavors. Fifteen years experience selling to cosmetic-soap-flavor and Pharmaceutical trade. Salary and commission or straight commission. Headquarters Los Angeles. Box 816, DRUG & COSMETIC INDUSTRY.

LIVEWIRE INSIDE MAN available. Background varied in engineering, production, planning and chemistry. Desire connection in New York Area. Smaller business preferred. Either wages or profit sharing. Can invest. 29 years old. G. Ryer, 964 E. 10 St. Brooklyn, N. Y.

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CANADA: "Plan ahead" and introduce your products to Canadian Consumers now through progressive Canadian agents seeking representation for American manufacturers on industrial and aromatic chemicals or specialty lines; well established firm in eastern Canadian markets. Also good connections for world wide export trade. Box 801, DRUG & COSMETIC INDUSTRY.

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SWISS WHOLESALE DEALER with efficient distributing organization and good connections with retailers seeks representation for drugs, pharmaceuticals, optical goods, photography, stationery, perfumes, barbers' requisites, hardware, electrical goods on consignment or for own account. Write air mail; full details to Hans J. Portmann, Baslel, Elisabethstr. 1, Switzerland.

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